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PROCEEDINGS  
OF THE  
WEST LONDON  
MEDICO-CHIRURGICAL SOCIETY.

VOLUME THE SEVENTH.

Session 1894=95.

*EDITED FOR THE COUNCIL*

BY

RICHARD LAKE AND L. A. BIDWELL.

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London

JOHN BALE & SONS

OXFORD HOUSE,

85-89, GREAT TITCHFIELD STREET, OXFORD ST., W.

—  
1896.

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## PREFACE.

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THE present volume (vol. vii.) comprises the proceedings of the Society during the Thirteenth Session, 1894-95.


The Cavendish Lecture delivered by Sir J. Crichton Browne, and most of the original papers, are published *in extenso*.

The Council deem it proper to state that the authors of the several communications are alone responsible for the statements, reasonings, and opinions contained in their several papers.

RICHARD LAKE, }  
L. A. BIDWELL, } EDITORS.

Sept. 30, 1896.





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# THIRTEENTH SESSION, 1894-95.

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REPORTS OF PAPERS, CASES, DEBATES, ETC.,  
AT THE  
ORDINARY MEETINGS OF THE SOCIETY.

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## PRESIDENT'S INAUGURAL ADDRESS

ON

“MEDICAL TITLES.”

BY

R. J. BANNING, M.D.

*Delivered before the Society on October 5th, 1894.*

GENTLEMEN,—Let me first of all thank you most sincerely for the honour you have done me in placing me in this chair, and to assure you that, although I cannot hope in any way worthily to follow in the footsteps of my distinguished predecessors, still it shall be my constant endeavour to prevent, so far as I can, the office losing any of its prestige whilst in my occupancy.

In thinking of some subject upon which to base a few remarks introductory to the work of the session, I felt that I, separated by many years from the schools and centres of modern medical science, was but ill-fitted to discourse upon any of the many interesting subjects which have formed the bases of the inaugural addresses of previous Presidents, and although, perhaps, amongst the reminiscences of a busy professional life, some things of importance and interest might have not inaptly been treated of, I have preferred to select a subject which has, of late years, occupied a good deal of professional and public attention, and one in which we all must feel a certain amount of interest.

The subject I wish to put before you is the vexed question of “Medical Titles,” and the so-called “Taking Silk,” and I have thought that possibly the view of the subject from the



standpoint of a general practitioner, practising for the greater part of his life in a provincial town, might have points of interest to an audience drawn mainly from the Metropolis.

Perhaps to some it may appear a matter of trivial importance, after all, by what titles medical men are called, and unworthy of members of a learned profession to trouble themselves on the subject. But I venture to think it is not so deemed by the the public, which would be quick at recognising the distinctions, were these distinguishing titles less confusing to the public mind than they are at present. Few of the medical titles in use are at all distinctive, and some, as in the army are cumbersome and positively ridiculous.

The public has, in its own way, solved the initial question of medical titles by dubbing every one of us, be our qualifications what they may, Doctor, and differentiate us only from the illegal practitioner by prefixing to the latter the adjective quack.

To my mind, there can be no earthly reason for disagreeing with the public in this matter, the more especially when we remember that Doctor—learned man—is an appellation equally appropriate to the practitioner in medicine and in surgery.

I hope to see the day when every qualified medical man is properly and appropriately addressed as Doctor.

It is open to the university graduate to substitute or append the letters M.D. to his name, or to the Fellow of a Royal College the F.R.C.P. or F.R.C.S. But, as there are Doctors and Doctors, why should we not, following the Continental usage, dovetail the monosyllable "*Med.*" between the Doctor and the surname, and so place beyond doubt the fact that the Doctorate in our case denotes a practitioner of the healing art. Again, a finer distinction might be made, but one probably impracticable, by substituting the monosyllable "*Chir.*" for those practising surgery solely or chiefly. I take it that the penal clauses of the Medical Acts would (or could easily be so made) cover the title of Doctor *Med.*, and a great stride would be accomplished towards showing to our clientele the distinguishing mark of a qualified medical man.

To the pure physician I should like to see the appendage M.D. strictly confined, and, to my mind, Dr. *Med.* Thompson would denote the general practitioner, and George Thompson, M.D., the physician.



For the Surgeon, pure and simple, the time-honoured, but now obsolete (save, perhaps, in Ireland), title of Surgeon ought to be revived. It is distinctive, and was for generations borne as the simple and effective title of the Military Surgeons.

At the time when I had the privilege of being in some little way associated with the army during the Crimean War, Assistant-Surgeon and Surgeon were the two most familiar appellations. As the military authorities have seen fit to substitute, in the case of medical officers, quasi-military titles, though without corresponding substantive military rank, I see no reason why this title, so appropriate and so honourable, should not be adopted by our civil Surgeons, showing at once to the public that its wearer is a practitioner in medicine devoted to the surgical branch of the profession, and deriving his qualification from a Royal College.

Undoubtedly, the natural corollary of the prefix Surgeon should be the prefix Physician for the consultant. But here we are met by a difficulty, and one, I fear, not easy to get over. The title Physician has, unfortunately, of late become, may I say without offence, somewhat vulgarized by its indiscriminate use by Licentiates of the Royal Colleges and Glasgow Faculty practising as general practitioners. The old idea connected in the public mind with the name Physician was, as I have often been told by my poorer patients in the North of England, “a Doctor who charged a guinea.” Alas! the name no longer bears that signification, but when combined, as we often find it, as Physician and Surgeon on a door-plate usually means a Doctor who takes very much less. It is a pity that a title which so accurately describes a Consulting Physician, and one so readily understood by the public, should, by this injudicious use, lose its original significance.

“ Consulting Physician Thompson ” would be as bad as one of the new army medical titles. Fortunately, many of our consultants, and let us hope that all of them will in time, bear some title of honour from the Crown, and M.D. after or before the Bart. or Knt. expresses almost the same thing.

Before leaving the question of medical titles, I would wish to say one word in condemnation of the proposals for instituting a new order of cheap Doctors with inferior qualifications. Nothing could be more hazardous to the public generally—nothing more derogatory to the high standing that practi-

tioners of the healing art claim and obtain amongst the learned professions. We may rest assured that as we estimate ourselves so will our patients and so will the public estimate us. The science of medicine is a progressive one, and common sense and true policy teach that to degrade in any way its practitioners is to retard its progress, and not to advance it. For my own part, also, I look with grave suspicion upon the proposed Midwives Bill. Already our imperfectly-educated female coadjutors in obstetrics are claiming to advise poor, suffering woman upon every ill that she is heir to, and although, like the poor, we shall probably have the midwife always in our midst, her functions should be properly defined, and cease when scientific work is needed.

I very much fear that the registered and licensed midwife of the future would soon consider herself, and impress the same idea upon her clientele, that the distinction between her qualification and that of a registered medical man or woman was infinitesimal.

The public (imperfectly knowing the facts of the case) would probably also take her at her word.

It is a noteworthy circumstance that in France every year a list of the qualified medical men, dentists, and midwives practising in each commune is drawn up and placarded throughout the district. The list gives the names, residences, and medical qualifications of each class of practitioners, and it bears at foot the signature of the Prefect or other high official. Now, we can hardly turn to the columns of a daily newspaper without noticing, especially in coroner's court cases, how useful such a publication would be amongst ourselves, enabling everyone, even the very poorest and most ignorant, easily and unerringly to find out whether, in his need, he has obtained the services of a qualified man or is being misled by the specious pretences of an illegitimate practitioner.

With regard to the question, so called, of "taking silk," there is undoubtedly much to be said for and against it. Our profession can never be quite analagous to the legal one, though in many ways bearing a considerable resemblance. In the legal profession, "taking silk" is chiefly a means to an end—that of obtaining the higher honours of the profession, the judgeship, the chancellorship and the peerage. With us



however, it could only be the *ultima thule* of a professional career, a sign that the overworked physician or surgeon desires greater ease and, possibly, less responsibility. In the legal profession many men, comparatively young, to whom fortune has been kind, seek and obtain silk early in their professional lives, but with us I fear few would care to limit their professional work and, probably, earnings until late in life. And, indeed, this is as it should be ; let the honours be to the victors in the strife. There can be no doubt that to the general practitioner the fact that his consultant will only advise upon cases introduced by a brother practitioner would remove the feeling that his patient seeking (probably without his aid or sanction) a second opinion, is, in some cases, practically lost to him. He may return and, equally possible, he may not. In the provinces this state of things is intensified. There, except perhaps in the very largest centres, the scope for a pure consulting physician or surgeon is necessarily limited, and the more so the nearer to the metropolis, although in these days of rapid and luxurious travelling distance is only slightly deterrent. The distinction in the provinces between the pure practising physician or surgeon and the consultant is so slight that when either is called in to a case it may, and does not infrequently, happen that on the next occasion of illness to the patient the former consultant becomes the regular medical attendant.

Therefore to the general practitioner in these circumstances a true consultant, advising only and strictly through the regular attendant, and absolutely debarred by the unwritten but effective usage to be thus established, would be hailed as a boon indeed. Now comes the question will it pay ? Without doubt in the metropolis (including also Edinburgh and Dublin) the honoured heads of the profession would gain absolutely in prestige, and probably lose nothing in pocket, by adopting a higher scale of fees and an absolute rule never to advise without a junior. In the provinces the question is an open one. In the larger cities and towns there will always be one or two men eminent for their attainments to whom the change would be of great benefit to themselves and to the profession at large. Indeed, it would probably be true that within a reasonable limit there could be described a circle sufficiently extensive, and yet with no part too remote, to place the

services of a medical Q.C. at the disposal of the population. If we take a map of England and trace such a circle round the more important centres of population, it will be found, I think, that the circles would, at many points, be found to be in contact.

Upon a review of the whole case it appears to me that the establishment of an order of medical quasi Q.C.'s would be of advantage both to the profession and to the community at large. The members of the new order would gain in prestige—in larger fees and a greater leisure—the general practitioner would feel sure that his consultant could never become a competitor, whilst the public would realise that the second opinion obtained was the highest the medical profession could offer. There would be an added dignity conferred upon the profession as a whole which could not fail to influence for good every individual member.

Whether the seniors will, in course of time, see their way to do this, it rests with them to determine. In the meanwhile, professional and public opinion is being slowly but surely formed for or against the scheme, and a decision, in possibly a not too distant future, is inevitable.

In closing this very inadequate address, and one which is in every respect only the expression of an individual opinion, allow me to thank you for your kind and attentive hearing—and also to express the hope that the session of the Society commenced to-night may be a fruitful one in producing good practical papers and useful discussions.

On the proposition of *Dr. Alderson*, seconded by *Mr. Lawrance*, a hearty vote of thanks was unanimously accorded to *Dr. Banning* for his interesting address.

At the same meeting **Dr. Henry Sutherland** read a paper on,

#### THE DIFFICULTIES OF PROGNOSIS IN INSANITY.

Every practitioner of medicine is aware how difficult it often is to give a prognosis in ordinary cases of bodily disease. There is no point in our professional career which is so likely to endanger the opinion the public may have formed of our skill in diagnosis and treatment. It can, therefore, be easily understood that in all cases of mental disease this difficulty



becomes much augmented, for the reasons that the patient will not assist us by describing his subjective symptoms, and will frequently complain that he is suffering from various bodily complaints of which there are no signs whatever. In forming an opinion about any given case of bodily disease, we are usually asked: "Will the patient recover?" "How long will he be ill?" "Will the patient die?" "If so, how long has he to live?" And, of course, such questions as these refer just as much to the somatic troubles which may accompany mental disease. But in the prognosis of insanity we have to answer in addition the following style of questions: "Will the patient recover *mental* health?" "If so, how soon?" "Will he die of the *mental* disease?" "If he recovers, will he have another attack?" "If he remains permanently insane, will his life be a long or a short one?"

The classifications which have been made of mental diseases do not throw much light on the subject of prognosis. Greissinger divides them under two heads, curable with functional disorder of the brain, and incurable with organic disease. Maudsley drops an excellent practical hint in his subdivisions into emotional and intellectual insanity; emotional insanity being a condition in which horrible crimes are committed, while at the same time the public are unable to detect any abnormality in the intellectual faculties. But to my mind the rule of thumb employed at St. Luke's Hospital is by far the best foundation upon which we can rely for a really useful division of the subject. At this hospital, curable cases are alone admitted. The medical officer is instructed to ask the friends who are applying for the admission of a patient: "What is his age? What is the duration of the attack? Is it the first attack or not? and lastly, what is the form of mental disorder from which the patient is suffering?"

One of the most important points in regard to prognosis is undoubtedly the age of the patient. Thurnam tells us in his statistics that "the probability of recovery is greatest in the young, and undergoes a regular diminution as age advances." Most authors look upon an attack occurring after the age of 50 as hopeless. Bearing this point in my mind, I gave a guarded but unfavourable prognosis in the case of a Member of Parliament, aged 50, who consulted me some years back.

His grandmother had committed suicide, and his father had died insane. The patient had what he called *une idée fixe*, a sort of modified delusion, with other well-marked mental symptoms. I certainly believed his case to be incurable. I prescribed rest, and I attended to his liver, which was much enlarged. Three months later he had completely recovered, and was able to make a long speech in the House of Commons. I must confess I was completely deceived on that occasion, as from the history of the case I had every reason to believe it to be incurable. As a contrast, I may allude to the following case. A youth was brought to me some time ago, aged 18, who was said to be a victim of self-abuse. The late Dr. William Wood, who had a more profound knowledge of insanity than anyone I ever met, pronounced the case to be hopeless. I did not agree with him, but I was wrong. In course of time the patient so far recovered as to be able to start on a sea voyage. But the first night at sea he told his attendant that a horse had put his head in at the cabin window. After this he became violent, was placed in irons and sent home to our asylum, where he now is, having been with us for more than twenty years without any lucid interval. My opinion that his youth would save him from being a chronic lunatic turned out to be incorrect.

The number of attacks a patient has had seriously affects the prognosis.

A lady at the change of life consulted me. She had become depressed in consequence of having been left a large fortune unexpectedly; she became suicidal, was admitted, and recovered. I prophesied that she would be a victim to recurrent melancholia. She went out, tried to keep house, but had not the strength to do so. Had a second attack and recovered. Went out again. Got into the hands of two drunken ladies, who swindled her. Had a third attack and returned to the asylum. She left, and was taken in hand by another lady, and has had several attacks since. During one of them I and her brother endeavoured to persuade her to become a Chancery patient. She refused to take our advice, and she is now gradually drifting from a state of melancholia into one of hopeless dementia. On this occasion I was right. But in a case later on I was not so fortunate.

A lady had six times suffered from puerperal insanity, and



had been received in our establishment. When her seventh child was being thought of, I advised that she should come to us as a boarder, and thus avoid the fatigues of the London season at this critical period. She passed through her seventh confinement without an attack. She had an attack on the birth of an eighth child. After that she was absent from her husband for two years. But after one year's absence from him, a ninth child was born, the father being supposed to be a cabman. A divorce was the consequence. Since then she has had children and has remained perfectly sane on each occasion. My idea that she would end in chronic dementia has thus far proved incorrect.

The form of insanity is also of the greatest importance in giving an opinion.

In Dr. Hack Tuke's "Dictionary of Psychological Medicine," there is an excellent article by Dr. Blandford, giving the probability of recovery in every form of insanity. It can only be remarked here that acute cases, as a rule, are curable, and that chronic cases are incurable.

According to a very clever classification of mental diseases, drawn up by a Committee of the Medico-Psychological Association, the following forms are incurable: general paralysis, epileptic insanity, senile insanity, paralytic insanity, and perhaps idiocy.

In Dr. Mickle's splendid work on "General Paralysis of the Insane," he mentions the names of not less than thirty-six authors who have published cases of recovery from general paralysis. In my own opinion, a recovery from general paralysis, when the symptoms are well marked, never has nor ever will take place. In such so-called recoveries, either a wrong diagnosis has been made or the patient has left the asylum during a temporary convalescence, and has been lost sight of.

In the advanced stage the diagnosis of this disease is generally very easy. At least, so I and some others thought about a gentleman whose case at the time attracted much attention in the psychological world.

This patient's left pupil was always much contracted and insensible to the stimulus of light. The right pupil was much dilated. He had marked hesitation in his speech, more especially in his pronunciation of linguals and labials, which,

as everybody knows, is very characteristic. I remember his delusions of grandeur very well. He said he had a horse which was going to win the Derby, that he was about to row for and win the Diamond Sculls, and that he had bought a four-in-hand. The case was carefully watched, epileptic attacks and other signs of advancing disease being daily anticipated. At the end of three months the patient made a good recovery, was discharged from the asylum, and, I have reason to know, never had a second attack. We found out afterwards that his hesitation in speech was congenital, that the contraction of the left pupil was due to an old syphilitic iritis, and that the delusions of grandeur were only those which may be met with any day in certain cases of acute mania.

Any form of insanity associated with epilepsy is generally considered incurable. The exceptions to this rule are infantile convulsions, epileptic insanity at puberty in girls, and epilepsy after a prolonged and excessive use of alcohol.

I was once sent down to Wales to rescue a lunatic who was being robbed of his property. He had been staying for some months in a low village inn, where, in order to conciliate him he was supplied with unlimited beer. I found him reeling about with a glass of beer in his hand, which he sipped all day. I brought him up with great difficulty to our asylum. On his arrival he had three distinct epileptic fits. We all pronounced the patient to be suffering from epileptic insanity. In this we were wrong, as the patient remained with us for ten years, and never had another epileptic attack, the three on admission having been entirely due to drink.

About the same time a lady, aged 28, was sent to us by Dr. Buzzard, suffering from epileptic mania. She commenced having these fits at about 25, and they were increasing in frequency every week. The diagnosis was clear, and the outlook hopeless. After being with us for some years she died from exhaustion, complicated with bronchitis. On this occasion we were all correct in our opinion.

A word as to idiocy.

The prognosis in this form is most unfavourable, but more hopeful than might be supposed. Dr. Shuttleworth tells us that of patients discharged from idiot asylums, after full training, 10 per cent. are self-supporting, and more than 40



per cent. are capable of performing the ordinary transactions of life.

Some years ago I was *locum tenens* at St. Luke's Hospital. No incurable patients are admitted to this institution, and all patients are seen by the committee on their arrival. A patient was brought into the Board-room whose relations had told us he was suffering from acute dementia. Two other medical men and myself were about to give directions as to the ward in which the case was to be placed, when a layman, who had sat for many years on the committee, exclaimed, "That is a congenital imbecile." I was sent out of the room to make further inquiries and I found the layman was quite right, and that the three doctors, including myself, were wrong in their diagnosis. The patient was not admitted.

A baby was brought to me by the parents about sixteen years ago. Forceps had been used at its birth, and the frontal bone had been compressed so that its form resembled the keel of a boat more than anything else. My prognosis was unfavourable. The girl is now 18, can only articulate as a child of five might do, and delights at this age to play with dolls and to read childish books. She is quite incapable of doing any arithmetic or managing her own estate.

It is impossible to describe cases illustrating points in prognosis in every variety of insanity. But we may take it for granted that in any patient in whom there is a regular periodicity in the attacks all hopes of cure are at an end.

I have a lady under my care at the present time who suffers alternately from mania and dementia, each form of mental disorder lasting as nearly as possible nine weeks.

I have also a gentleman similarly affected. In most cases of folie circulaire which have come under my notice I have found dementia taking the place of mania more frequently than melancholia.

Homicidal insanity is in my experience incurable. I was called upon some years back to examine a man who had murdered his wife and two boys, and also attempted to murder his two other children, but they refused to drink the poison he had prepared for them. The murderer then placed his own head on the line of a railway when an express train was expected, intending to commit suicide. He was rescued from this position by a pointsman. He was very much

attached to his wife and the children he had killed ; he had a good balance at the bank, and was in a good situation. He gave himself up and confessed all to the police. I had not the slightest doubt that the prisoner was suffering from the form of insanity known as impulsive, which has been so ably described by Dr. Maudsley, and that he was an incurable lunatic. The judge, however, took a different view, informed the court that he would have no more murderers let loose on the plea of mental derangement, and was pleased to say that I had thrown dust in the eyes of the jury. After retiring for a few minutes the jury returned to the court, their verdict being "Not guilty, on the grounds of insanity." I visited Broadmoor Asylum some years later, where the prisoner had been sent, and found him to be one of the most maniacal, homicidal patients in the institution, and also perfectly incurable.

The duration of the attack has naturally a great influence upon the chances of recovery.

At the Retreat 80 per cent. recovered who had been treated within the first three months of their attack. During the first year about 60 per cent. recovered.

After the first year about 10 per cent. recovered, Dr. Thurnam says. It may be stated, fairly, that six times as many cases recover within the first year as recover after the first year of the illness. After two years, recovery is rare. Nevertheless, recoveries have been known to take place after six, ten, and even twenty years' duration. A lady was admitted to our asylum suffering from suicidal melancholia. Before she was placed under treatment she had gouged out her right eye with her thumb, in obedience to the command in the Bible, which says, "If thine eye offends thee, pluck it out, and cast it from thee." After some time the melancholic symptoms disappeared, and she settled down into what we consider to be a state of chronic, incurable dementia. At the end of seven years she made a sudden recovery, and was discharged, perfectly able to manage her own affairs. In a long experience, I have never known a case recover after so long a duration as seven years.

We have patients with us now, both male and female, who have been under our care for thirty, forty, and in one case fifty years. It is needless to remark that the prognosis is perfectly easy in such cases.



With regard to sex, it may be observed that a larger proportion of women than men recover. The numbers are 44 per cent. for females, and 36 per cent. for males. One reason for this excess of recoveries on the women's side is that they are less afflicted with general paralysis than are the males.

Allow me now to turn to somatic influences with regard to this subject. In my experience the prognosis in insanity from sunstroke is favourable in mild cases, but most unfavourable in severe cases. Sir Joseph Fayrer tells us that on *post-mortem* examination after sunstroke, the brain and its membranes are found congested. My own idea is that when a person is attacked either slightly or seriously by *coup de soleil*, the sympathetic circles of nerve fibres surrounding the arterioles become paralysed permanently, and in consequence do not contract naturally on the blood vessels. Hence a larger amount of blood is conveyed to the brain under even a slight stimulus, and excitement and mania are the result.

I was once at a private ball at a seaside town. A young gentleman entered the room, much flushed and talking loudly; he proceeded to pull the cornet out of the mouth of the trumpeter, lifted the hands of the pianist from his instrument, and pushed the violin from under the chin of the fiddler. He was expelled from the house, everyone saying he was drunk. He recovered next day, called on the hostess, and made his apologies in due form. This young man was an officer in the army, and had had a slight sunstroke. He was a teetotaler, but feeling tired before the ball, he took a glass of wine to revive himself, which went to his head and caused a transitory attack of mania. I had no reason to disbelieve his statement that one glass of wine produced these awkward consequences.

But insanity from a severe sunstroke is a very formidable and incurable form of mental disorder. I had for many years an Indian General under my care, who was one of the most dangerous patients it has been my lot to deal with. His condition was entirely due to a severe sunstroke he had sustained during an unusually hot summer in India. In such cases I have observed that there is a period of incubation. The symptoms most characteristic of the disease do not appear till some months after the exposure to the solar rays, although perhaps in the meantime a slight intellectual and

emotional departure from the healthy standard may be observed. The occurrence I am about to relate took place during the Indian Mutiny some forty years ago.

The General had been told off to guard a certain number of commissariat waggons. His story, which he presented to me most modestly, has neither a clinical nor a pathological interest, but well illustrates how the mind may become unhinged even some months after a sunstroke has visited the patient. He said: "I was in command of a party of forty horsemen. We came suddenly upon a force of 400. It was a case of ten to one. It was my duty to retire, but I felt that murder was in the air. I gave the orders to my men to charge. My trumpeter was shot down on the right of me, and my orderly on the left of me. I cut my way in, and I cut my way out. All perished except myself, and I thought I was well out of it."

In these few words were expressed what appeared to me to be a most romantic episode of military life.

Unfortunately, there is a seamy side to the story. The General was tried by court martial, and his behaviour was so eccentric on this occasion that a medical examination as to his state of mind was ordered. He was found insane, and sent from India to our asylum, where he remained for twenty years, and finally died an incurable lunatic.

I now pass to the prognosis in cases of alcoholic insanity. There is no class of cases which recover so rapidly as do those of acute alcoholic insanity, due to one inordinate drinking bout, and there is no class of cases more incurable than those who during a long course of years have soaked themselves day by day in stimulants.

A captain in the Royal Artillery was admitted suddenly one afternoon to our asylum. He had indulged in an unusual amount of alcohol, and had become mischievous, and almost homicidal. He had taken his wife in his arms and had held her over the balcony of his house, and threatened to dash her on the spikes of the area railings below. The police were called in and he was certified, and sent to a harbour of refuge. On admission he was in a state of violent mania, and passed the night in the padded room. I visited him again next morning, and after a three hours' examination, could find no indications whatever of mental aberration. He had com-



pletely recovered in one day, the cure being simply due to abstinence from stimulants. By his own request he was detained as a boarder for a week, as he said to keep him from the drink. On his discharge he took more freely than ever to alcohol, and died six weeks later from delirium tremens.

The prognosis was, however, very different as to even a temporary recovery in the case of an old gentleman, aged 76, I was sent for to attend one Sunday morning in the Regent's Park. He had for not less than forty years been in the habit of getting drunk frequently, although able to go down to his office in the City, and manage his affairs fairly well. At last he became so unpresentable that his sons were obliged to protest against his taking any further part in the business. The unfortunate part of the case was that the old gentleman would neither die nor become insane. In France a *conseil de famille* would have been held to decide what was to be done with this gay young worshipper of Bacchus. Unfortunately no such law obtains in England. I only saw him once, but I heard afterwards that his and his son's business was going from bad to worse, owing to his unfortunate propensities.

In this case it was suggested to my mind that the law of China as to the treatment of lunatics might have been justifiably employed. In this enlightened country they have but one method. All lunatics there are treated by decapitation.

I have before alluded to Dr. Maudsley's clever subdivision of mental diseases under the two heads, emotional and intellectual insanity.

Emotional insanity is a very important form to recognise. It is very rare. It leads to horrible crimes being committed by its victims. The intellect being nearly, but not quite, intact, it is impossible to persuade the relations that there is anything wrong with the mind of the patient. The prognosis is usually most unfavourable in this form.

I have a lady at present under my care, residing in the house of a medical man. She has been insane for about five-and-twenty years. On one occasion a high authority in lunacy visited her and pronounced her to be perfectly sane, I asked him how long he had talked to her. He said ten minutes. I told him to go back and give her ten minutes more. In the course of the second ten minutes all the delusions and hallucina-

tions came out, and he was obliged to confess that she was an incurable lunatic.

This lady knows a great deal, but not all, about her investments and dividends, but ask her to describe a carriage accident or any place of amusement she has visited, she breaks down before the end of even a short narration. She indulges in the most filthy conversation, rendering it impossible for her to take her meals with the family. The case is incurable.

I had another very curious case under my care a few months back. The patient was a clerk in Somerset House, engaged in the most complicated transactions during many hours of the day. Excess of alcohol was the root of the evil in his case. If he were in the public streets or an omnibus, he fancied that people put up their hands to their mouths, stamped their feet, or made grimaces on purpose to annoy him. He had a brother and a wife, one of whom always accompanied him to and from the office. It was useless to tell him that they, who had met the same people he had in the street, had never seen them do anything which might be construed into an insult. He became worse, and I obtained leave of absence for him for six months. My prognosis was that as long as he kept from drink he would be perfectly sane. He became a teetotaler and recovered perfectly. The extraordinary part of the case was that this man, afflicted with delusions of suspicion, was able to carry on severe mental work all the time he was apparently insane.

As to delusions generally it may be said that if the patient has a variety of them, quickly changing and accompanied with noisy violence, the outlook is hopeful. Fixed delusions existing for more than a year, and continuing when the acute symptoms subside, mark the case as incurable. From among such patients we obtain our asylum kings and queens who are content to work in the scullery or laundry during the day, and assume court dress or a regal crown when festivities take place in the evening. But of all delusions those that are progressive are the worst as regards prognosis.

Your general paralytic will commence by telling you he is going into Parliament, that he has been knighted, made a baronet, created a peer, that he is the Prince of Wales, and finally, that he is God Almighty Himself. This is an impor-



tant point to be remembered in diagnosing a case of general paralysis from one of chronic mania. A great deal of light is thrown on prognosis by observing the postures and movements of the insane. I have a young lady at present under my care who sits all day with her arm over the back of a chair and her head leaning on it. This position has remained fixed during the day for three years. The outlook is hopeless.

Another lady, young on admission, rubs her nose continually, making it very red. This she has done for many years.

A gentleman under my care walks round two flower beds in the garden, his course taking the shape of a figure of 8. He kicks anyone who gets in his way, but is otherwise harmless.

One old gentleman has for twenty years rolled a pocket handkerchief up in a ball and turned it round and round in his left hand. With his right he continually percusses his knee, and thus wears out the cloth of his trousers in less than a week, necessitating endless patches.

All monkey tricks in the insane mark the case as incurable.

One of our patients filled two walnut shells with fæces, gummed the two halves together, and gave the walnut to an attendant to crack. This he did with his teeth, much to the delight of the patient and the discomfiture of the attendant. This gentleman was insane for upwards of thirty years.

Hæmatoma auris almost always is found amongst chronic incurable cases. I have a lady with a marked swollen ear at present under my charge, who will never recover. I have, however, seen hæmatoma in sane people, generally prize fighters. I exhibited a professional boxer at the Clinical Society some years ago, who had this peculiarity.

Certain bodily complications have great influence on the outlook. For instance, the recoveries in puerperal insanity are very numerous, but if the case should be accompanied by albuminuria the patient almost invariably dies. If the patient should increase in weight, the mental condition remaining unaltered, the outlook is very unfavourable. A West Indian lady, admitted in 1891, weighed 8 st. 13 lbs., and on the third anniversary of her admission, that is in 1894, she had increased in weight to 12 st. 2 lbs. This was an increase of three stone, or one stone a year. Her delusions

are always the same, that she is suffering from various bodily complaints, of which there are no tangible proofs.

Syphilitic insanity in the early stage is fairly curable, but later on ends in the death of the patient. I had an Indian colonel under my care for many years suffering from syphilitic mania. Not being satisfied with my treatment, a very eminent physician was called into consultation. A third doctor, a friend of the patient's, was present. The eminent diagnosed the case as one of syphilophobia, that is, a delusion on the part of the patient that he has contracted syphilis. I made no remark, and the eminent departed, with his fee. When he had left the room I turned up the Colonel's trouser and showed his friend, the third doctor, a large, open, brown, syphilitic sore, which the patient had had on his shin for many years. The patient died a few months later.

The condition of the blood in the insane is a great guide in giving an opinion as to how long a patient has to live. When I was at the Wakefield Asylum I examined under the microscope the blood of some hundreds of lunatics. The results were very satisfactory. It would take too long to enumerate them here, but I cannot resist mentioning one point which was to me very striking. I found that if in general paralysis of the insane a much larger proportion of white corpuscles as compared with the red was present, the patient was sure to die within four days, although he might apparently be in fairly strong health. This and my other observations have been confirmed by Dr. Lauder Lindsay and Dr. Rutherphail.

Before concluding I should like to say a word or two about the diagnosis of recovery in a patient.

Recoveries are always calculated on the admissions. According to Thurnam they may vary from 25 to 50 per cent., but, as I have said, at St. Luke's Hospital, where only curable patients are admitted, the number of recoveries reaches 60 per cent.

Generally speaking a rapid recovery is likely to be succeeded by a second attack. A slow recovery is much more hopeful. Convalescence from insanity is indicated by quietness of mind in the patient; he speaks freely about his disease; he does not perpetually bother the physician as to when he is to leave the asylum, he asks to see his friends, and he returns to his usual employments.



An outburst of weeping in females during an attack of acute mania is a good sign, as showing that the patient is aware of her condition. On the other hand a contented state of mind points to increasing dementia.

Esquiron remarks that many patients who are considered cured by their relations are not so really. In this I quite agree. In proof of this I may mention that not less than three patients removed from our asylum by the wish of friends, and contrary to our advice, committed suicide, one on the very night of his discharge.

Patients are frequently sent back to me to be examined after they have left us, in order to ascertain whether or no they are capable of managing themselves or their affairs. You prepare a list of their former delusions from your case book, and tax them with them one by one, and draw your conclusions from their answers. You also can get valuable information from the attendant who usually accompanies them, as to their actions and habits being sane or insane since they left the asylum. In almost all cases, three months after discharge there are still present traces of the old disorder.

Frequently the patient looks lost and distressed, the angles of the mouth are drawn down, there is a general feebleness about the outlines of the features, and the bodily health is never quite re-established. They complain of great irritability, and they are easily moved to tears. Their letters also eloquently express their undecided and vacillating state of mind.

In females there is a weak smile on the face and frequent showing of the gums, the eyebrows are elevated as they speak, and there is a marked transverse corrugation of the forehead expressive of doubt and anxiety. But it is only by long experience and a careful examination of facts that we are able to determine from these rough rules what is to be done with the patient.

The importance of giving a correct prognosis in case of mental disease cannot be over estimated. Frequently large pecuniary interests depend upon our opinion, as, for instance, when a large sum is offered to the patient if his life is only to be a short one, as in general paralysis, or if he is to receive a pension, if his life is to be a long one, as in chronic melancholia.

The matrimonial prospects of both sexes are also much affected by the form of insanity and other points which have to be gone into when an alliance of this kind is contemplated. Cases of hysterical mania in young girls are very hopeful as well to recovery as to the *non*-probability of a second attack. Any girl who has had two attacks of insanity ought not to marry, in my opinion.

The parents of both parties will come and consult us on these difficult and delicate matters. One rule I always lay down in such cases, and that is, that the sane contracting party should be told the whole truth about any previous attack from which the other may have suffered, and then, if he or she choose to proceed with the engagement they do so with their eyes open, and take the responsibility on themselves. We have had the wife of an eminent medical man with us for some years. During her engagement she told her future husband that she had some dreadful secret to reveal to him. He thought she referred to some previous engagement. She said to me afterwards: "He little thought I had two asylums at my back," meaning she had been twice certified as a lunatic. Six weeks after marriage she became insane, and remained so for many years, the unfortunate husband having all this time to maintain a wife who was worse than dead to him.

Finally, our method of arriving at a correct prognosis may be compared to weighing in a pair of scales those points, which, on the one hand, are in favour of, and on the other, are against the chances of recovery in any given case, such points, however, not being estimated by their number, but by their quality. Experience alone can teach us the value of each individual point. But when the importance of the subject is considered, it is surely our duty to neglect no opportunity of improving our natural powers of observation, and thus be enabled by the accuracy of our opinion to confer health and happiness upon our less fortunate brothers and sisters.

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In the discussion which followed the reading of this paper the *President*, *Dr. Starling*, *Dr. Travers*, *Dr. Dockrell*, *Mr. Alderton*, and *Mr. Tuke* took part.



Meeting held Friday, November 2nd, 1894, the President, Dr. R. J. Banning, in the chair.

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A Discussion on Diphtheria was opened by **Dr. H. Campbell Pope** with the following paper:—

MR. PRESIDENT AND GENTLEMEN,—When, during the last session of this Society, I intimated to our Secretary that I would be prepared to read a paper on Diphtheria, I had in my mind a few points only, mainly bearing on the subject of diagnosis, and I was surprised to find on receiving my Agenda paper for October that I was set down to open a discussion on this fruitful subject; however, as the matter had passed beyond my control, I have endeavoured shortly to summarise the more salient points and debateable questions, in the hope of eliciting a useful interchange of ideas, though I much wish that so important a task had been entrusted to abler hands.

Sir J. Rose Cormack says: “Diphtheria is an infectious specific disease, endemic in certain places, sometimes prevalent as an epidemic.” The infectious specific diseases being dependent on the presence of micro-organisms, we may profitably spend a short time on the Natural History of Diphtheria, with a view to elucidating some points regarding the habitat and behaviour of its specific organism. The disease—that is, the organism—is endemic in certain localities, sometimes prevalent as an epidemic. When epidemic in a locality where it is not endemic, it is brought or taken there. Here, then, are three useful lines of inquiry:—(1) What sort of localities are those where the disease is endemic? (2) What makes it become epidemic in such localities? (3) How is it carried to other localities?

First, then, what sort of localities are those where the disease is endemic? In Paris and Florence the disease is, or was, endemic, and in the parts of those cities where insanitary conditions existed—such as over-crowding, dirty dwellings, foul air, bad nourishment, and, above all, dampness. Where, then, poverty and its attendant evils, coupled with humidity, prevail, there is the place to look for endemic diphtheria. But we need not go as far as Paris or Florence

for our examples, they are to be found much nearer home. For my first ten years of practice in Shepherd's Bush I never saw a case of diphtheria; for the last eight or nine years they have come under my notice in increasing ratio. During this period population has been trebled, and spots have been built over which twenty years ago were miasmatic marshes. Notably, I would refer to a local board school, which was at length built on a swamp (after having once collapsed) of so low a level that drainage was practically impossible. From this school I have had several cases, mostly living in the now crowded area surrounding the school buildings, inhabited by a poor and struggling population. The majority of cases I see, come from this area, and it is probably now endemic there. To set up this endemic character it is quite likely that one case only would prove sufficient, given the insanitary and humid conditions just referred to. The diphtheria germ thrives in damp filth, but it is to be noted the population does not, and insanitary conditions, combined with damp, lower vitality and resistance to disease, and make the mucous membranes of the throat and nose susceptible, like seaweed, to moisture, affording such a culture ground for micro-organisms as the most ardent bacteriologist might desire. Thus, the conditions which favour the micro-organisms render the population receptive.

It is hardly necessary to multiply examples on this head, and we will pass to our second query. What makes it become epidemic in such localities? First, and most important, is the importation of a case of the disease into a place where persons congregate, or from which they may be supplied with some much-used article of food. I have spoken of a school, and schools are powerful causes of the spread of diphtheria; such cases will be familiar enough to all of you. A good instance is that recorded by Dr. Bruce Low, in which an out-door school treat was held on a damp day in a tent, after a prevalence of throat disease, the result being that the disease broke out again within twenty-four hours, with a virulence and fatality quite in excess of anything which had gone before.

Then as to food, milk is quite frequently the vehicle, as we shall see under the third query. Less frequent are the distributions of the germs by other trades, of which the follow-



ing, quoted by the Hon. Rollo Russell, is a good specimen : A school teacher returned home with diphtheria. Within the next six months, cases occurred among her family and relations. The disease entered the house of the family physician and several deaths occurred. He left town and his house was vacant for some months. People went to and from the infected houses to the post-office, which was also a grocer's shop, and the grocer visited the infected houses with his groceries. His family was next attacked and broken up and its members scattered. A new physician came to occupy the vacant house of his predecessor. Soon after moving in his children were attacked. A lying-in woman, whom he attended and her boy were both attacked ; then a neighbour who called upon this woman ; and so the disease extended for eighteen months. Enough has been said to show how human intercourse spreads the disease, and doubtless in villages, where everyone knows everybody else, this is a prime factor in distribution. Negative evidence on this same head was supplied by Dr. Abbot, of Massachusetts, who, in a great epidemic in the State, noted that four towns had no death from diphtheria during the period. Their chief characteristic was their *inaccessibility*.

Again, drains may become infected and cause an epidemic. A middle-aged lady under my care contracted a severe attack from inhaling the stench from a drain outside a butcher's shop. Mr. Adams, of Maidstone, believed the outbreaks in that town to be related to abnormal oscillations of subsoil-water, which kept the soil damp, favoured decomposition of its organic contents, afforded a breeding-ground for specific organisms, and at frequently recurring intervals expelled from the soil into the atmosphere an air laden with these organisms. And we must not hold the air guiltless in respect of carrying the contagion, as cases can be adduced in proof of its capability of doing so. Domestic animals, such as cats and fowls, also play their part in distribution.

Such, then, are the main factors in causing epidemic to spread in a suitable locality, human intercourse and communication, food, drains, subsoil-water fluctuations, atmospheric convection, and domestic animals.

The third head introduces some new features. How is the disease carried to other localities ? First in importance is

the conveyance of a patient to an uninfected district, and the pollution of the surroundings by him in any of the ways above mentioned. The clothing of an infected person may be sent to an uninfected district, or the letter of an infected person may convey the poison to another person at a distance. More frequently milk is the agent. The milk may be drawn from a farm where diphtheria is present, or, worse still, a diphtheritic person may milk the cows, infecting their teats. Cows inoculated with diphtheria contract a disease which may prove fatal. The udders and teats exhibit vesicles—chafes and sores.

In the lymph of these udder vesicles the true bacillus of diphtheria can be found, and from the milk itself cultivations can be made. In Dr. Klein's experiments two cats were by accident supplied with such milk. In these animals the disease called "cat diphtheria" resulted. Dr. Thorne says: "We are able to appreciate the import of those apparently trivial ailments in milch cows to which so little importance has hitherto been attached by veterinarians and dairymen, but which have so commonly been discovered in association with epidemics of milk diphtheria." While on the subject of milk, I would diverge for a moment to deprecate the custom of leaving milk-cans at houses. I have frequently witnessed dogs making water over them, and once a boy passing water into one of them. I have seen a girl with malignant diphtheria drinking out of one, and I have seen numbers of cans in infected bedrooms. Such milk cans are at many dairies washed in the most primitive manner with water of the appearance of pea-soup, and not by any means subjected to the action of boiling water, which, at least, is required for their purification. Milk churns are frequently sent from London with stinking remains in them, and few farms are provided with the necessary steam apparatus to render them safe.

People who have been in contact with a stricken person may convey diphtheria to another locality. Dr. Thursfield says: "The infection is portable, I have no doubt of it whatever. I have known it taken to a house by a person living in an infected house, but not at any time suffering herself, who went to visit a person a mile or two off, involving a considerable walk and a passage by ferry across a river, and



only remained a short time in the house, but sufficiently long to leave the germ of diphtheria, which broke out a day or two afterwards." Corpses, when taken a distance, may transmit the disease. It may be conveyed also by the atmosphere, by water, or by animals, such as the importation of diphtheria into one of the Greek Islands by a flock of turkeys reported by Dr. Turton.

Such then are the means by which the poison is spread, and it is a poison of high vitality, persisting for months or years. Roux and Yersin have found that the diphtheritic germ may, if protected from air and light, remain virulent for an almost indefinite time. Dr. Thursfield says: "I would hesitate to put a limit to the time beyond which the revivication of the old germs should be considered impossible."

The poison is a bacillus, first discovered by Klebs in 1883, and subsequently fully worked out by Loeffler in 1884, and is commonly known as the Klebs-Loeffler bacillus.

Having considered, thus shortly, the natural history of the disease, it will be well to pass on to the subject of diagnosis, which is, as all know, a matter of great interest and no small difficulty. Never was diagnosis in diphtheria so important as to-day, when a new treatment promising a revolution in our methods is under the observation and criticism of the profession, for with a faulty diagnosis not only are erroneous views propagated, but useless statistics are compiled and the progress of true science delayed. Obviously, if we grant that the Klebs - Loeffler bacillus is the efficient cause of diphtheria, then the presence of the microbe in the throat or nasal secretion is evidence of the nature of the disease. But here in practice we are confronted by a grave difficulty; it is not as yet possible for the busy practitioner on his round, even in London, to collect specimens for bacteriological examination by some expert, and in the country the case is worse, for time of the most vital importance would be wasted in coming to a diagnosis by this means. We must as yet, for some time to come, be driven to our old methods of clinical examination, and confirm, if possible, our decisions by a subsequent bacteriological investigation. In most cases the exudation on the throat is our chief object of suspicious scrutiny—and what wide differences we notice in the opinions of different observers on such exudations.

It is familiar to all of us, that it is often a matter of extreme difficulty to say whether any exudation is or is not diphtheria, and in such a delicate balancing of issues it is not an unfair or an uncharitable assumption to hint that the weight of a notification certificate may have turned the scale in favour of a diagnosis of diphtheria in many a doubtful case. Some practitioners will certify all such exudations as diphtheria, while others will as stoutly resist notification until no reasonable doubt can be entertained.

Now, it is certain that many of these exudations on the tonsil are not diphtheritic, yet they may become so by being diagnosed as such and the unfortunate patient removed to the diphtheria ward of a fever hospital. Hence, especially where removal is contemplated, great caution is necessary, and I would draw attention to a practical point worthy of close attention; it is this, where the exudation in the early stage, being then of a grey or greenish-yellow colour, is limited to the tonsillar surface, it is (even though other symptoms are suspicious) not to be certainly considered as a diphtheria, but should it attack the pillars of the fauces, or the velum palati, or the posterior pharyngeal wall, its nature is in my opinion certainly diphtheritic, and I always certify such cases, having found by experience that the test is a reliable one.

Now, this test may also be taken as valuable evidence of the presence of diphtheria, even where you are undoubtedly engaged with the presence of another fever, such as scarlet fever or typhoid. The two diseases may co-exist, as is well known. In a family which I recently attended, four persons were attacked with diphtheritic throats; in three of them scarlet fever with desquamation was present, and one died of diphtheritic laryngitis, the fourth did not take scarlet fever, but the tonsils and part of the soft palate sloughed and came away. Albuminuria and intense prostration are important diagnostic signs, while in cases which have been unsuspected the subsequent appearance of diphtheria paralysis causes an unexpected solution of the nature of the sore throat. The laryngoscope and rhinoscope may bring to light patches unseen by faucial examination only. Malignant diphtheria may be overlooked if the fauces are not examined, when a patient is first seen when already in the typhoid condition.



Confluent herpes of the throat is uncommon, and may be mistaken for diphtheria; but it does not spread beyond the limit of its first onset, and is often accompanied by labial herpes and always by the stinging herpetic pain. Difficulty may be experienced in diagnosing from scarlet fever, especially where there is a diphtheritic rash; here the history is of importance, the prevailing nature of the epidemic also, and the greater prostration which is seen in diphtheria—some syphilitic conditions might also cause temporary difficulty.

Lastly, there is the vexed question of true croup diphtheria, which is eminently one for the bacteriologists to decide, as for practical purposes of treatment there is little to choose between them also; and our old friend influenza, which certainly produced many cases extremely difficult to decide upon, and which were probably cases of a mixed nature, complicated by the presence of the diphtheria bacillus.

*Forms of the Disease.*—Much has been written on the various types or forms of diphtheria, and without doubt of much value in estimating the severity of the disease, or its pathological location, nevertheless, such classifications become of more literary than practical interest when we come to recognise the vast importance of the destruction of the bacillus, or of the checkmating of its baneful powers, in the plan of treatment which modern science is urging us to adopt. But let me not be misunderstood, for I hold that clinical observation is of a value not to be over-rated, and in the interests of our patients I should look forward with dismay to a time when the literature of every fever should be pigeon-holed together with its appropriate hypodermic syringe and tabloids, and labelled “*Hic finis est.*”

The following forms are recognised: (1) The typical form; (2) the mild or catarrhal form; (3) the inflammatory form; (4) the malignant form; (5) the gangrenous form; (6) the chronic form, this classification being arranged on a constitutional basis. Differences dependent on site are (a) nasal diphtheria, and (b) laryngeal diphtheria or croup.

(1) The course of a typical diphtheria it is needless to enter into, the only remark I would make is as to the period of incubation. Here some important questions are involved, which will readily occur to those engaged in general practice, or as surgeons to schools. Two to five days are commonly

given, but I think the period should be extended considerably, and I have seen at least one case in which the onset was within twenty-four hours. An interesting question is, how does the primary blood-poisoning occur? It is generally quite obvious before we see the culture on the pharyngeal mucous membrane, and yet, if we believe that the bacilli cause this chemical poisoning of the system, we should rather expect to see the culture first and the poisoning after. And here comes in the great importance of the so-called drain throat, for the drain throat we may look upon as a local evidence of systemic deterioration, and the throat so affected becomes the culture-ground very often for bacilli.

I have seen the same thing where persons have slept in a room for a long period contaminated by escape of coal gas; this has deteriorated their resistance, and in the instances in my mind the sufferers have become the prey of the typhoid bacillus. In nearly all outbreaks of diphtheria we find faulty sanitary surroundings, and does it not seem reasonable that through these the primary blood-poisoning takes place, and the bacillus diphtheria gets its chance to grow?

For no one can doubt that our environment is constantly, in such a city as this, one teeming with bacteria; the air we breathe, the water we drink, the food we eat, the clothes we wear, the furniture we use, swarm with these minute enemies, only waiting the opportunity when their own pabulum shall become developed in their human prey.

Therefore, we shall find that our various forms of diphtheria depend much more upon the constitutional state of the patient, as brought about by his sanitary surrounding and natural physique, than upon any artificial division of bacilli into groups, such as virulent Loeffler bacillus, non-virulent Loeffler bacillus, or the short, plump, false Loeffler bacillus, for doubtless these creatures, like ourselves, would, on inspection, come under the sub-sections of fat or lean kine.

(2) The mild or catarrhal form, being unattended with visible membrane, may go unrecognised until a diphtheritic paralysis points out the true nature of the attack.

(3) In the inflammatory form, great redness and pain in the fauces is noted, and as Sir William Jenner has pointed out, in this form the joints sometimes become swollen and inflamed. This form is very like those cases of scarlet fever



which are accompanied with diphtheritic throat and rheumatism, and bacteriological examination should decide between them.

(4) Malignant diphtheria is rapidly fatal, and the temperature is rarely high or the throat much inflamed, but great fetor accompanies the breath, and rapid blood changes occur, with hæmorrhages and petechiæ, ushering in the delirium and coma or syncope which terminate the scene.

(5) The gangrenous form is mostly seen following, or in connection with, scarlet fever, and is rapidly fatal, with symptoms comparable to those of cholera-poisoning.

(6) Chronic diphtheria is less dangerous to the patient than to his neighbours or family, and many cases of lingering diphtheritic poison about a house are due to this form. The poison may reside in the nasal secretion, or false membranes may form in the pharynx or larynx, and be expelled by coughing or vomiting for weeks after the original attack. M. Hybre reported in 1875 two cases in which false membranes were expelled for eight and ten weeks respectively after the performance of tracheotomy for laryngeal diphtheria.

*Albuminuria* in diphtheria was first noted by Dr. Wade, of Birmingham, and in the greater number of cases albumen is present. It usually appears within twenty-four hours of invasion, but is sometimes delayed much longer, and it is not usually a dangerous symptom.

*Pyrexia* as a symptom is of doubtful value in diphtheria; in most cases the temperature rises rapidly up to  $103^{\circ}$  or  $104^{\circ}$ , falling gradually to normal by the fourth or fifth day, but in severe and malignant cases the temperature is often quite low. Fresh formation of membrane may be accompanied by exacerbations of temperature. Thus Faralli observed a case in which diphtheria affected a wound, where the temperature rose in a few hours to over  $105^{\circ}$  before the false membrane was well formed. It fell to normal on the third day, while the infiltration was at its maximum. It is important to remember, as pointed out by M. Labadie-Lagrave, that a sudden ascent to  $103^{\circ}$  or  $104^{\circ}$  on the fifth or sixth day of the disease points to the development of some complication, either lobular pneumonia, acute nephritis, or acute endocarditis.

*Rashes* are observed in some epidemics, mostly in children. They consist usually of minute red points resembling scarlatina, but not being followed by desquamation.

*Paralyses.* — These are frequent and serious sequelæ of diphtheria, and may follow the slightest case—probably one-fourth of the cases suffer. The loss of power is accompanied with loss of cutaneous and muscular susceptibility. The first muscles affected are usually those of the soft palate and pharynx. In rarer cases the loss of power affects the muscular system largely and causes death by involving the respiratory muscles and diaphragm. I once saw three children die in one family from this cause, two in one epidemic and the third one a year after. This would seem to show a peculiar predisposition. The older the patient the greater the predisposition to paralysis.

*Cardiac syncope* is a symptom to be remembered and feared in this complaint, for it may occur when all else seems to be doing well.

*Statistics.* — It is a sad reflection that the returns of the Registrar-General show an increasing number of victims from diphtheria year by year, allowance having been made for increase of population.

In London this is especially the case. For years there has been an almost continuous rise. In the decade ending 1870 the metropolis had a death rate from this cause of rather more than one-fifth per million, which was appreciably lower than the rate for the whole of England and Wales. In the next decade the rate was lower, but London then stood exactly in this respect where the country did, and since then the positions have been much more than reversed. Thus in 1892 the death rate from this cause in London was more than double the rate for the rest of England, and this high rate itself was nearly doubled last year. As the country returns are not to hand for last year, it is impossible to say what was the relative increase, but comparing London with London, diphtheria has increased its ravages more than three-fold since the year 1861. As the disease is rather more fatal to those it attacks than is small-pox, the state of things indicated by these figures is clearly serious.

*Treatment* resolves itself naturally under two heads (*a*) treatment of the disease as affecting the individual, and (*b*) preventive treatment as affecting the public.

The treatment of diphtheria is now engaging much and widespread attention, in connection with the so-called anti-



toxin method. Now, though it is said that the injection of antitoxin is not harmful to those who have not diphtheria, yet to obtain a scientific estimate of its usefulness it will be well that all cases reported as cases of diphtheria treated by antitoxin, should be verified by bacteriological examination. It is otherwise, where we are confronted with a case of throat complaint with exudation, our object here is not the compilation of statistics but to insure the safety of our patient, and whether we trust to antitoxin, or whether from lack of the remedy, we are debarred from its use, one principle stands out clearly from amongst the confusing and conflicting plans which have from time to time been proposed in diphtheria treatment. The late estimable alderman of the City of London, Sir Peter Laurie, when, after his election as Lord Mayor, he took his seat upon the magisterial bench, said: "It is a maxim of British law that any suspected person should be considered innocent until he has been proved to be guilty, but in taking this chair, it is my intention to administer justice in another way, and I shall look upon every person who comes before me as guilty, until he can produce evidence to show that he is innocent." That is the principle for us to go upon when confronted by a suspicious throat.

It should at once be treated as a suspect by thorough and systematic disinfection. And about the means of doing this there may be much profitable discussion; in this neighbourhood several workers have expressed views in which they place confidence. Dr. Brownlow Martin pins his faith to the sulphite of magnesium, Dr. Harrison to the perchloride of mercury, Mr. Barnes has used sulpho-carbolate of soda with much success, and I myself have used mainly this drug and the antiseptic "aminol" which is made by the action of lime water on trimethylamine, and has the great advantage of being non-poisonous. It would be well if our bacteriologists and chemical physiologists would give us some definite pronouncement as to the best disinfectant to use for the throat, and the best means of applying it satisfactorily, and I think our Society might well appoint a sub-committee for this purpose, as it lies at the root of prophylaxis, and of the rational treatment of diphtheria.

At the same time, when we are taking these energetic local measures, we should endeavour to put our patient into

the best condition for combating disease and preventing further infection, by, first of all, thoroughly isolating him in an appropriately furnished warm chamber, by clearance of the primæ via and by antiseptic medicines internally, with light and supporting nourishment. Diphtheria is of all diseases one of depression, and a sustaining method must be pursued from the first.

Of internal medicines which have been proposed in diphtheria the name is legion, but most of us will, I think, depend upon antiseptics such as the chlorine compounds, sulphurous acid, the perchloride, or, better still, the periodide of mercury. Iron has been lauded, but it is in my experience of doubtful value. The modern antipyretics in diphtheria are dangerous. This treatment by antiseptics is one of the two lines of treatment which are now open to us, and its object is to destroy the microbes or weaken them so that the leucocytes of the blood or the cells of the tissues may be able to complete their destruction. The second line of treatment is either to eliminate the poisons formed by the microbes or to use some antagonising remedy. The treatment by elimination, by purgatives that is, or these in combination with diuretics and sudorifics, and by large imbibitions of water, is still older. Newest of all is the treatment by antagonistics to the microbic poison, the much talked of antitoxin treatment. We all know the tolerance of poisons conferred by their habitual use, for instance, morphine; this tolerance is obtained by the morphia taker for himself, the marvel of the antitoxin treatment is that the tolerance can be conveyed to another by hypodermic injection of tolerant blood serum. This method of treatment is known by various names, in France, "serum therapie"; in Germany, "blut-serum therapie." The honour of the discovery belongs to the Koch School in Germany, first by the identification of the Klebs-Loeffler bacillus, and secondly, by Behring's researches on the nature of immunity. Certain animals are immune from certain diseases. Similar immunity can be conferred on others, by accustoming the animal to repeated doses of virus of gradually increasing intensity. The power of resistance depends on a principle residing in the serum of the blood, called antitoxin. If some of this serum be taken from an animal which has been rendered immune and injected into another the latter becomes also immune.



This is "serum therapie." It can be used as a preventive or as treatment after the invasion of the disease. Dr. Roux, a most talented colleague of M. Pasteur and energetic worker in this field, proceeds as follows: (1) he acquires a pure virus by cultivation in bouillon for some weeks. The virus is filtered off and bottled. (2) A horse is injected with pure virus, beginning in small doses and repeated in increasing quantities until at the end of two or three months, the animal can stand large doses and is completely immuned. (3) The blood is taken from the horse's veins and the serum stored. (4) The serum (antitoxin) is injected under the skin of the patient. The mortality in the Hospital des Enfants Malades from February 1 to July 24, during which time 448 cases were admitted, was 24.5 per cent. under this treatment. The average mortality of the previous four years was 51.7 per cent. There was no change in the treatment but the serum injection. In other words the lives of 100 children were saved in one hospital in six months.

In the Trousseau Hospital during the same six months (without serum) in 520 cases there were 36 deaths, giving a mortality of 60 per cent. In Berlin, with goat serum, Kossel and others have reported 230 cases with a mortality of 23 per cent., and Ehrlich reports better results with improved serum. In two hospitals 89 cases were treated, including 22 tracheotomies, with 12 deaths, or a mortality of 13.4 per cent., while out of 49 cases treated without serum in one of the same hospitals, 18 died, giving a mortality of 36.7 per cent. A further series of 192 cases, treated with horse serum by Aronson, gave a mortality of 14 per cent., against a rate varying from 32.5 per cent. to 41.7 per cent. in the same hospital. Dr. D. Watkin Hughes, at Barnham Broom, Norfolk, has treated 40 cases recently, 10 with serum, 30 without; of the 30, 10 died; the injected 10 all recovered. He states the membranes shrivelled up and peeled off in masses.

No harm *seems* to result from the injections. Dr. Roux reports the aspect of the patients as totally different, the expression not leaden and heavy, but bright and lively. The duration of the illness is curtailed, the membrane ceases to grow within twenty-four hours of injection, and detaches in from thirty-six to forty-eight. Ehrlich says: "It is astonishing how the disease loses its malignant character." In most

of Roux's cases 20 c.c.'s were sufficient in one injection. If the pulse and temperature remained high it was followed by 10 or 20 c.c. more. The largest total dose was 125 c.c. The treatment was much more effective when begun early. Rashes such as urticaria were observed during convalescence.

In comparing statistics an important source of fallacy is the varying malignancy of different epidemics.

For instance, in one fever hospital in London last year the mortality was 39·9, in another 26 per cent., so that apparent success with serum might be due to a mild form of the disease. In Paris, however, it was probably not so, and the improvement was too great to be accounted for by mere variation in type, for less than half as many died as in previous years. Dr. Behring seems overconfident when he prognoses a mortality of only 5 per cent. A great deal has yet to be learnt as to preparation, dosage, strength, and other conditions for the use of the serum. Dr. Virchow has declared it to be the imperative duty of medical men to use the new remedy. The *Times* says the production of a good supply of lymph is clearly a question for the Government to consider, and decide upon with as little delay as possible. Sir Joseph Lister appeals for subscriptions to the same end. Such is the promising outlook of this new treatment, and it looks as if the antidote to the poison has been discovered, but the mode of preparation, it is clear, is one involving a great element of uncertainty, and, though we are told that there is no harm in injecting the serum in non-diphtheritic cases, it is far from reassuring to read of the temporary interruption in the manufacture of diphtheria antitoxin, caused by the death of some of the most prolific horses in Germany from an outbreak of glanders, especially as from twelve to fifteen months are necessary for the ripening of the serum.

Surely it will not be beyond the powers of chemists to find out the exact nature of this antidote. The behaviour of the poisonous amines renders it at least possible that amongst them the substance may be found; at all events it is devoutly to be hoped that we shall not be injected with animal products for all specific diseases, without attempts to get further into the solution of the problem by scientific chemists.

Time scarcely permits me to even mention the lines upon



which preventive medicine may take its part in staying the plague, but sufficient evidence has been adduced to show that three great factors are at work in diphtheria epidemics; namely, school attendance, defective school, street and home sanitation, especially escapes of sewer gas, and, lastly, damp, whether of houses or localities. Mr. President and gentlemen, I must crave your indulgence for the feeble way in which I have introduced this great question for your discussion; for my own part I shall feel that I have done something if I have succeeded in calling attention to the great necessity for sanitation. In the words of Beaconsfield, the question is "Sanitas Sanitatum, omnia Sanitas," if we are still to be guided by our old proverb, that "Prevention is better than cure."

*Dr. Hood* referred to the fallacy of statistics in this disease as shown in his hospital experience, pointing out the decrease in mortality after the age of 7. He considered that diphtheria was a disease of modern origin, since no mention is made of it in the old medical writings, but that for some years it has been becoming more widespread. He stated, too, that in those cases where the membrane is especially abundant the prognosis is more favourable.

*Dr. Drewitt* insisted on the necessity of free ventilation, and of the allowance of abundant cubic area for each patient, referring to an epidemic of diphtheria which occurred at a hospital in consequence of the closing of the ventilators and windows, although with good ventilation it had remained free, and this, too, when the children were transferred from the isolation to the general ward two days after the membrane had disappeared.

*Dr. Wolfenden* referred to the cases of sore throat resembling diphtheria, which were caused by streptococci, staphylococci, or by pneumonococci, and since such cases present all the old cardinal symptoms of diphtheria, he considered that clinically it was impossible to diagnose them from diphtheria, it was therefore only by bacteriological examination that a diagnosis could be made. He urged the necessity of Government arrangements for the distribution of culture tubes for the examination of suspected cases, and explained the American system.

*Dr. Eccles* moved the following resolution:—"That in view

of the necessity for accurate diagnosis at an early stage of acute throat affections, in order to effectually isolate and treat cases of diphtheria, a committee be appointed to draw up a memorial from this Society to the Local Government Board urging the establishment of stations throughout the country for the bacteriological examination of inoculations from suspected cases." In urging its adoption, he considered that such a memorial, coming from this Society of general practitioners, would prove more effectual than a similar one already sent by the British Laryngological Society.

*Dr. Jackson*, in seconding the motion, referred to the influence of sewer gas in preparing a suitable nidus in the throat for the development of diphtheria. He condemned the action of the vestries in allowing the ventilation of the sewers into the roadways, and pointed out that this was directly contravening the Act.

*Dr. Atkinson* raised an objection to the resolution on the ground that it would increase the work of the parish doctors.

*Mr. Lennox Browne* agreed heartily with the resolution. He considered that the amount of membrane in any case was the essential factor in producing a fatal result. In the event of the antitoxic treatment proving of value he urged the importance of not neglecting local and dietetic treatment.

*Dr. Seymour Taylor* regarded diphtheria as a general and not as a local disease, and thought that death occurred in most cases from asthenia, and not from suffocation. He would discourage tracheotomy in children under one year of age. He considered that the fauces must be prepared by tonsillitis, or by some other form of inflammation, before inoculation with the bacillus could take place. For local treatment he recommended a solution of salicylate of soda.

The further discussion was adjourned to a special meeting.

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Special Meeting (adjourned from 2nd inst.), Friday, November 16th, 1893, Mr. F. Lawrance, Vice-President, in the chair.

Mr. Lawrance introduced

# THE ADJOURNED DISCUSSION ON DIPHTHERIA.

He referred to a case which had been imported from Boulogne, and which was supposed to be the first case of diphtheria in this country. He commented on the increase in the number of reported cases since the introduction of notification.

*Dr. Bennett:* Sir Thomas Watson, in his "Practice of Physic" (vol. 1, 4th edition, page 864), in writing on the subject of diphtheria, says, "The parts first chiefly concerned are the fauces. A whitish or ash-coloured membrane forms upon the pharynx and tonsils, and extends forward to the soft palate and into the nostrils, and backwards into the œsophagus, sometimes into the larynx, but seldom into the trachea." The above symptoms, with albumen in the urine, with a pulse of about 120, and temperature about 100° to 102°, with great depression and feelings of lassitude, I recognise as diphtheria, and since meeting the late Dr. H. W. Fuller very many years ago, who prescribed the following, I have been in the habit of treating my cases on the same lines with the most satisfactory results:—

## Prescription.

R̄	Phil. ferri sesquichloride	...	...	3 iii.
	Quinine disulphatis	...	...	grs. xii.
	Acid hydrochl. purif.	...	...	℥ xx.
	Potas. chloratis...	...	...	3 ii.
	Syrupi	...	...	3 i.
	Aquæ	...	...	3 viii.

A sixth part every three hours.

The above does away with the necessity for gargles or other local applications, and as a rule the patient feels better within twenty-four hours, provided he gets plenty of fresh air and suitable food, but if I had waited for a bacteriologist to have examined the secretion for the bacilli before arriving at diagnosis I consider I should have allowed my patients to

get into that state of poisoned condition that in all probability they would not have recovered.

*Dr. Ball* related particulars of a severe case of diphtheria which he had recently under his care at the West London Hospital, and which had been treated with Aronson's anti-toxic serum with strikingly good results. He proceeded to discuss the relative merits of tracheotomy and intubation, and urged a more extended use of the latter operation. His own experience, in thirty-two cases of intubation convinced him that this operation gave results at least equal to tracheotomy, and, as it was a bloodless operation, the consent of parents was much more readily obtained. He also referred to the value of intubation in certain troublesome cases where after tracheotomy the tube could not be dispensed with.

*Dr. Scanes Spicer* approached the matter from the point of view that any measures that gave fair promise of diminishing the spread of diphtheria were of not less importance than the treatment of the disease. He had followed closely the literature concerning the use of the antitoxin serum and its highly-promising results. He thought that it was no imaginary danger that the recorded successes of antitoxin serum might lead to the neglect of other considerations of great weight in determining—or the reverse—the invasion of the system by the poison. He referred firstly more especially to the general health of those exposed to the poison, and secondly those concerned with the condition of the mucous surfaces at which the poison usually gains access to the organism. The first had been well dealt with by a previous speaker, and the present speaker wished to emphasize as his contribution to the discussion the relation of chronic disorders of the nasopharynx, pharynx and tonsils, such as chronic congestion, catarrhs, adenoid hyperplasias, granulations, and enlarged spongy tonsils, to diphtheria, though such a relation applies with equal force to such specific fevers as scarlet fever, measles, and whooping-cough. It was a matter of certainty to those who had studied this relation that persons suffering from these chronic disorders of the upper respiratory mucous membranes and fauces were not only more liable to "catch" the fevers, but were more likely to have bad attacks and complications and not to recover. These views are confirmed by such authorities as Gottstein, Lemen, De Havilland Hall,



and Ball. Dr. Symes, the resident medical officer at the London Fever Hospital, to whom he spoke of the relationship, told him that he had previously discussed the subject with Dr. Winter of the North-Western Fever Hospital, and that the experience of the latter was that, if children afflicted with adenoids contracted diphtheria they invariably died.

In this relation he thought it should be recollected that the period of greatest incidence and of greatest fatality from diphtheria has been proved to be under 15, which is the same period when the prominence of these chronic throat conditions is most marked. When it is considered that it is during this period of life that children are mostly aggregated in schools, and that the proportion of children who have these chronic, weak, spongy throats is so great, it is not surprising that the poison finds here a favourable culture-ground and centre of activity. He therefore advocated, in view of the terrible havoc caused by diphtheria—and to a similar but less extent by scarlet-fever, measles, and whooping-cough—that there should be a systematic inspection of the throats of all school children in the same way that the eyes and teeth are now receiving attention at some of the rate-supported schools, so that the health official might detect such chronic diseases as adenoid growths, enlarged honeycombed tonsils, spongy and granular pharynx, &c., and refer the poor to a hospital for treatment and the well-to-do to receive the attention necessary for the restoration of these tracts to a condition of normal resistance and health in the ordinary way. This official or systematic inspection would not be in any way rendered superfluous by the discovery of a perfect specific for diphtheria, since the same necessity would arise with reference to other specific fevers. It hardly seems practicable to inject an antitoxin serum for each bacillus—even if the future discloses the existence of such—and in dealing with such scourges as these we cannot too indefinitely multiply our defences or neglect any means of safety.

*Mr. J. Shepley* *Part* remarked that many speakers had laid emphasis on the point that the clinical distinctions between so-called “coccus throat” and bacillary diphtheria were vague, and, further, that there was a concensus of opinion that these diseased states are constituted by a more or less pure cultivation of one or other bacterium, and that the several symp-

toms and objective signs are caused by the action of toxins elaborated by these organisms being absorbed into the general circulation from the seat of cultivation. He, therefore, could not help differing radically from those speakers who, on a previous occasion (2nd inst.), felt justified in omitting active local treatment and pressed on the notice of the meeting the excellent results in both cutting short the disease and avoiding the dangerous sequellæ, if a policy of local antisepsis were carried out as efficiently as possible by as powerful antiseptics as were available in this situation; and he further expressed the opinion that if it were thoroughly carried out we should soon hear much less of the mortality of these conditions in hospitals and elsewhere.

*Dr. Hill* considered that bacteriological examination, as carried out under the American system, could not be considered as conclusive when it gave negative results, since it might be possible to swab a part of the throat where no bacilli were present. He also referred to several cases of diphtheria where there had been no faucial affection.

*Dr. Abraham* showed the New York apparatus for the bacteriological examination of suspected throat cases, and explained the system. He also pointed out that the bacillus could be detected on the fauces some days after the disappearance of the membrane. He showed a tube culture of coccus diphtheria.

*Dr. Cagney*: The occurrence of diphtheritic paralysis without faucial infection, to which *Dr. Hill* had referred, was indisputable. In view, moreover, of the results achieved by recent investigations, it was expedient to regard paralysis as a part, rather than as a sequela of the disease. *Dr. Cagney* dwelt upon the importance of being able to recognise diphtheritic neuritis and to distinguish it from other forms, as, for instance, the alcoholic. He pointed out that in the former the remarkable tolerance of strong faradic currents was a useful indication. He referred to the discovery by *Dr. Martin* of two separate toxins—the first an albumose, very violent, acting locally, and probably by a direct saturation of the tissues; the second an organic acid, elaborated in the spleen, thrown out at an uncertain interval, less virulent, but more widespread in its action and propagated by blood infection. He indicated the similarity of the latter to other toxic agents,

and gave reasons for regarding it as the cause of neuritis in the extremities.

*Dr. Colman* referred to passages in writers early in the Christian era which appeared to be clearly descriptions of diphtheria. He emphasised the importance of observing the knee-jerk, which is often lost for a few days during the acute period of the disease without any other paralytic symptoms occurring. Its absence in a case brought for an opinion after the membrane has cleared up may be most important in establishing a diagnosis. He deprecated the use of brushing, preferring sprays, as less likely to cause abrasion, and emphasised what had been said on the paramount importance of abundant cubic space and frequent changes of the air of the sick room.

*Dr. Reginald Dudfield* : I take a somewhat different position in this discussion to that of the speakers who have preceded me—being concerned with causation rather than treatment. I desire, however, to first speak of treatment.

Recently I had charge of a provincial hospital where there had been an epidemic of diphtheria just before my appointment. The experience of my predecessor and myself was that excellent results were obtained from the exhibition of ferri perchlor. with glycerine (both in large doses) and mineral acid, and the topical application of crude paraffin. This nauseating drug was soon tolerated, and found to give great relief.

As regards notification, it has been stated that with the introduction of this system there was a sudden great increase of diphtheria. That is true, in that a very much greater amount of diphtheria became *known*. Without doubt, some of the cases notified as diphtheria are notified in error. Last quarter, however, in my district, the mortality among cases removed to hospital was 20 per cent., and that among cases treated at home (which would include the majority of doubtful and erroneous diagnoses) the mortality was 18 per cent. It would appear, therefore, that there cannot be so many erroneous diagnoses as might be expected. It is in deciding the very mild, doubtful cases, that an official bacteriological examination would be useful.

In a new house just occupied, which was built on made ground, diphtheria recently occurred. The made ground



consists of all sorts of refuse, and there appears to be no concrete under the foundations. The drain was found unsound.

The proposal to examine the throats of all school children I regard as impracticable, but I think efforts should be made by the profession generally to secure more air-space for children in schools, *i.e.*, that they should not be so packed on the forms as to touch one another.

There is, in my opinion, some connection between heavy rainfall and this disease, but the real facts have yet to be ascertained.

*Mr. Lake* urged the necessity for the diagnosis between the coccus diphtheria and bacillus diphtheria on the ground that cases of coccus diphtheria might contract the true diphtheria if placed in the same ward with it. He stated that whilst in true diphtheria the temperature is always subnormal, in coccus diphtheria and in the mixed forms the temperature is high.

*Dr. Campbell Pope*, in reply, agreed with *Dr. Hood* as to the fallacy of statistics, the mortality being so much greater in the first seven years; statistics of hospital mortality also should take note of the cubic space allotted to each patient. *Dr. Drewitt's* remarks on the great curative effect of abundance of fresh air in treatment were especially valuable. *Drs. Wolfenden, William Hill, Abraham, and Part* had alluded to various aspects of the bacteriological features of the disease, and clearly showed that there were throat complaints indistinguishable from diphtheria (except by prolonged investigation), caused by various cocci. These throats never caused paralysis. He considered, as pointed out by *Dr. Scanes Spicer*, that unhealthy conditions of the naso-pharynx largely predisposed to diphtheria, and showed how that the damp and filth-laden localities were not only those which predisposed to naso-pharyngeal disease, but also were the favourite habitat of the *Klebs-Loeffler bacillus*. When in addition the local authorities, as spoken of by *Dr. Jackson*, vomited forth volumes of sewer gas under the noses of the public from sewer ventilators all the necessary factors for producing the disease were present. The benefit which *Dr. Bennett* found he derived from an acid mixture with chlorate of potash and tonics was, *Dr. Pope* considered, due more to the acid than to the amount of chlorine evolved; the

Loeffler bacillus cannot exist in an acid medium, and the success Sir Morell Mackenzie had with lactic acid was doubtless due to this cause, and not as he thought to solution of the membrane. In conclusion, he reviewed the theory of antitoxin treatment, and pointed out the necessity for accurate diagnosis, lest a coccal diphtheria case, by being injected, might be subjected to the dangers of paralysis which otherwise would not have arisen.

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The resolution proposed by *Dr. Symon Eccles*, and seconded by *Dr. Jackson*, was then put to the meeting; an amendment to the effect that the resolution should be referred to a special sub-committee of the Society was moved by *Dr. Abraham* and seconded by *Dr. Ball* and carried.

The Sub-Committee submitted the following report to the Society on April 5th, 1895.

#### REPORT OF THE "DIPHTHERIA SUB-COMMITTEE."

Whilst this Committee thoroughly acknowledges that the establishment of stations throughout the country for the bacteriological examination of inoculations from suspected cases of diphtheria would be of great advantage to the medical profession and the public, it thinks that, considering the general attitude of the government towards the endowment of scientific research, no advantage would be gained by presenting a memorial.

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Meeting held Friday, December 7th, 1894, Mr. F. Swinford Edwards, Vice-President, in the chair.

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#### CLINICAL EVENING.

##### FLATFOOT.

Mr. KEETLEY showed a girl, aged 17, on whom he had performed Trendelenberg's operation for flat-foot ten weeks before. The condition followed rheumatic fever five years ago, and her sister was similarly affected; the right foot was

worse than the left, and the ankle valgus was well marked, therefore osteotomy of the tibia and fibula just above the ankle was performed, the result is very good. Although approving of Ogston's operation for most cases of flat-foot, Mr. Keetley recommended Trendelenberg's operation for those cases where ankle valgus was the marked symptom.

#### EMPHYEMA IN WHICH A DRAINAGE TUBE HAD BEEN LOST.

Mr. KEETLEY also showed a man, aged 35, from whose chest he had extracted a drainage tube, which had been lost there in the country. Portion of the sixth rib was resected in two successive portions, from before backwards, until the tube could be reached and felt with the finger. Part of the seventh rib was also resected as the cavity was very large. The case was now doing well. He recommended a similar procedure in such cases unless the tube can at once be extracted through the original sinus.

*Mr. Paget* referred to two cases where he had succeeded in extracting a lost tube through the sinus with urethral forceps.

#### ARTIFICIAL DENTURE.

Mr. H. LLOYD WILLIAMS: Patient's age 11. Upper incisors and canine, with corresponding portion of jaw, removed for myeloid epulis. Deformity corrected by means of artificial denture carrying a gum block of three teeth.

#### LUPUS.

Mr. L. A. BIDWELL: Patient's age 16. Lupus of eight years' duration involving the whole of the right cheek, right side of nose, and extending below the angle of the lower jaw. It was freely excised and grafted in December, 1893, and some recurrence was noticed on the side of the nose and in the centre of the scar about six months later. These patches were excised in November, 1894, and regrafted by Thiersch's method. The lupus was a very extensive one, over twenty square inches of skin being removed. There is practically no contraction of the new skin.



## INGROWING TOE-NAIL.

Mr. L. A. BIDWELL: Patient had the nail of the right great toe removed four months ago. When it grew again the inner edge of the nail again gave trouble and produced ulceration. There was also redundance of skin on the tip of the toe. Since this redundance of skin on the inner side and tip seemed to be the cause of keeping up the trouble the following operation was done:—A wedge of skin and subcutaneous tissue about  $\frac{1}{4}$  in. wide was dissected out from the inner side and top of the great toe, the incision being about  $\frac{1}{4}$  in. from the nail. The wound was united with horsehair sutures, and healed by first intention. The ulceration quickly healed, and the nail has now covered the scar left by the operation. The operation was done under nitrous oxide gas, and is recommended either in conjunction with or instead of the old operation of avulsion.

## TINEA CIRCINATA.

Dr. P. S. ABRAHAM: The patient, a man aged 34, came with a somewhat irregular small patch on the left cheek near the eyelid, with a raised rather indurated margin and depressed crusted centre, the whole lesion being superficially so much like rodent ulcer in its general appearance and site that the exhibitor was surprised when told that it had only appeared during the past week. A more careful examination and the use of the microscope soon, however, revealed the presence of abundant mycelium of a macrospore trichophyton. The spot had arisen after a scratch from the nail of the man's little boy. A point of interest is that another child in the family is attending with alopecia areata of old standing. There is no definite history of tinea tonsurans in the household.

## ACROMEGALY.

Mr. STEPHEN PAGET showed a case of acromegaly. The patient, a man aged 57, had first noted slight bowing of the legs twenty-six years ago, but could not say when he first noted any change in his face, hands, or feet. His face now showed all the features of advanced acromegaly—enlargement of the supra-orbital ridges, enlargement and thickening of the

soft tissues of the nose and ears, a very large tongue, and extraordinary lengthening and prominence of the lower jaw. The hard palate was high, narrow, and V-shaped. The larynx was greatly enlarged; the voice was deep and harsh. The thyroid gland could not be felt. The curves of the dorsal and lumbar spine were greatly exaggerated; the lower part of the sternum was tilted far forward. The hands were enormous, and had the massive square fingers characteristic of the disease. There was slight forward outward bowing of the femora. The feet were greatly enlarged. The patient's general health remained good, but he had lost strength. Heart-sounds normal, no albumen, no mental change.

*Mr. Lunn* considered that many cases described as osteitis deformans were in reality cases of acromegaly.

*Mr. Lloyd Williams* remarked that the enlargement of the lower jaw was confined to the symphysis. Remarks were also made by the *President* and by *Dr. Batten*.

#### EXCISION OF ELBOW.

*Mr. PAGET* also showed a case of partial excision of the elbow-joint for a wound involving the joint. The patient, a girl of 13, had cut her elbow with a bit of broken glass. Five weeks later she was brought to the hospital with a sinus at the back of the joint, discharging thin purulent synovial fluid. *Mr. Paget* opened the joint, removed the head of the ulna, which was carious, and scraped two carious patches on the front and back of the humerus, just above its articular cartilage. The radio-humeral joint was not disturbed. The girl did well, and now had perfect use of the arm.

#### MULTIPLE ACUTE NECROSES.

*Mr. PAGET* also showed a case of multiple acute necrosis in a boy nine years old. The disease had attacked the left tibia, the right clavicle, and the left zygomatic arch. The whole shaft of the tibia had perished, and had been removed; small pieces of the clavicle and the zygoma had been thrown off by exfoliation. Later in the disease, sinuses leading to the bare bone had formed over the upper third of the right humerus, and over symmetrical areas on the upper outer

aspect of each femur ; these were now almost healed. Mr. Paget said that, judging from another case lately under his care, it would have been better to trephine the tibia at once, in the hope of saving some portion of the bone from dying.

*Mr. Keetley* did not agree with the necessity for trephining the bone in acute necrosis, and considered that the size of a sequestrum did not depend entirely on the amount of bone exposed.

PAPILLOMATOUS CYST OF THE LEFT OVARY SUCCESSFULLY REMOVED FIVE YEARS AFTER OVARIOTOMY FOR A SIMILAR CYST OF THE RIGHT OVARY.

Mr. ALBAN DORAN exhibited this specimen for its clinical interest, it being unadvisable for evident reasons to show the patient herself.

In 1889, when the patient was 50, and had just ceased to menstruate, Mr. Doran removed a papillomatous cyst of the right ovary. He made a note at the time that "the left ovary was elongated and atrophied." The patient took chloroform badly, and had a miliary rash afterwards. No antiseptics were used. Early in 1894 another cystic tumour developed ; Mr. Doran removed it five years and one month after its fellow. Antiseptics were used. In spite of precautions the patient took chloroform badly and again had a miliary rash, but recovered quickly. Three weeks before the second operation, Mr. Doran removed a multilocular cyst of the right ovary from a patient on whom Dr. Robert Barnes had performed ovariectomy fourteen years earlier. She bore four children between the first and second operation.

At the first operation in the second case, there is no doubt that it was sound practice to save the then healthy right ovary. The correct practice in the first case is doubtful. The statistics of Von Velits and Pfannenstiel tend to show that in papilloma the opposite ovary should be removed even when healthy. Other authorities object to this principle. In the first case it would have been better had the healthy ovary been removed. The exhibitor urged that operators and surgical registrars should keep a close watch on cases of this disease, where one ovary only has been removed, and should carefully report recurrences and second ovariectomies on the same patient.



*Mr. Keetley* pointed out that in other symmetrical organs affected with tumours, no surgeon would think of removing a healthy gland because the opposite one was affected.

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Meeting held Friday, January 4th, 1895, the President,  
Dr. R. J. Banning, in the chair.

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**Dr. W. Colman** read a paper on

#### SOME POINTS IN THE TREATMENT OF EPILEPSY.

MR. PRESIDENT AND GENTLEMEN,—Epilepsy is frequently spoken of as a hopeless disease, in which little or nothing is to be hoped for from medical treatment. I am optimistic enough to believe that there are few diseases which we can more definitely control and alleviate by medical advice and treatment than this terrible affliction. There are many diseases in which a more favourable prognosis may be given and a more uniformly successful issue brought about. There must often be a doubt in our minds how far a favourable result in any case is due to our own sagacity and skill, and how far to the assistance of our most powerful ally, the *Vis Medicatrix Naturæ*. In the case of epilepsy, however, spontaneous tendency to recovery is so rare as to be neglected in our considerations, and whatever improvement is brought about may be attributed to the means employed, with much greater certainty than in most other cases. Questions of diagnosis are necessarily omitted, although for successful treatment early recognition of the disease is of the utmost consequence.

It is not possible in the limits of a short paper, to enumerate and discuss the various specifics for epilepsy which have been vaunted in different times and ages. In the sixth century we are told that if there was a local aura, the part affected was invariably excised or removed. Aëtius, again mentions castration as “infallible,” but omits to state how many patients lived to appreciate the benefits of his energetic treatment. The Chinese recognised early that the brain was the organ mainly at fault, and endeavoured to ameliorate

the patients' condition by smearing the scalp with an inflammable composition, and then setting fire to it! Even at the commencement of this century the writings of Bright, in this country, and Maisonneuve in Paris, show that the treatment of an epileptic was purging and bleeding—bleeding and purging, to the utmost limits of the patient's endurance.

In this short paper, I shall merely attempt to outline the methods of treatment which appear to give the most satisfactory results in average cases. I may probably omit, owing to necessity of compression, several alternative methods of great value in exceptional cases. One preliminary word of caution as to drawing conclusions from the results of treatment is necessary:—Epilepsy is not only in many cases a disease which makes its appearance when the closest study fails to show any reason for its occurrence, but it is occasionally just as mysterious in its sudden cessation. Of this I may quote two instances: the first, a boy, aged 7, had suffered from severe fits for several years. He had been under observation at a children's hospital. His fits were so numerous that it was impossible to retain him in the ward there, and he was transferred to the Epileptic Hospital at Queen Square. He was suffering, when admitted, from a sharp attack of diarrhoea of a few hours' standing only. Bismuth was given for this condition, and from the first dose, and till he was lost sight of some months afterwards, he never had another fit. The second, a girl, had been in the hospital for months, having from thirty to eighty genuine epileptic fits per diem. Numerous drugs were tried without the slightest effect, when a much vaunted new drug was prescribed. There was some delay in procuring this, and for a few days she was without any treatment whatever. Before the new drug arrived, her fits suddenly ceased, and when heard of nearly a year later had not returned.

There is a certain percentage of cases (not a large one unfortunately) which show a tendency to recovery without treatment. There is a larger percentage which steadily get worse in spite of any treatment with which we are acquainted, but in the great majority of cases we can, by appropriate medical and general treatment control the disease, rendering the fits less frequent and less severe, often checking them altogether; and resisting the deteriorating effect which the disease has,

when unchecked, on the physical and mental condition of its unfortunate victims.

In a few cases the patient has a warning of a fit sufficiently long before a fit to enable him to take action. In a few fortunate individuals this may occur an hour or two before the fits, and frequently the threatened fit may be warded off if the patient takes at once a rapidly acting aperient, such as a Seidlitz powder.

In a few cases, where the warning occurs locally, as in one hand, a fit may be averted by tying a ligature tightly round the wrist, although this often fails. In those cases where an epigastric sensation precedes the attacks, they may often be cut short by the administration of some carminative, such as ether, ginger, or peppermint. I am in the habit of advising such patients to carry some essence of ginger and a few lumps of sugar in the pocket and to take a few drops of the former the moment they experience the usual abdominal sensation.

The treatment of the epileptic paroxysms themselves is usually a simple matter. The convulsions themselves may be left without treatment, but there are certain damages to be avoided. The first, the embarrassment of breathing by tight clothing round the neck, may obviously be avoided by wearing loose collars. Death does occasionally occur during a fit, from the patient vomiting while unconscious and still lying on his back, the vomited matter getting into the air passages and choking him; and it is wise to warn friends of this possible danger and to instruct them to turn the patient on his side if he shows the least tendency to vomit. The most frequent cause of a fatal issue is suffocation, from the patient turning over in a nocturnal fit, and burying his face in the pillow. Three such cases have come under my own observation during the last twelve months, and the accident is by no means an infrequent one. We have, however, a preventive remedy ready to our hand, viz., the use of a pillow formed of such materials as will allow the patient to breathe freely when the face is buried in it. There are two pillows made which answer the purpose. The best is made of fine chain wire, and covered with an open canvas. It is safe and comfortable, and can be obtained from the Longford Iron Works. A cheaper one can be stuffed with cocoa-nut fibre and covered with open canvas, and a very comfortable horsehair "epileptic



porous pillow " has been made for me by Messrs. Garrould, of Edgware Road, who keep it in stock.

If the convulsions are continuous and the patient is in the status epilepticus, a smart purge should be administered, such as calomel and jalap, or even croton oil placed at the back of the tongue, and a full dose of chloral hydrate and bromide of potassium injected into the rectum.

The general treatment of epileptics must be adapted to the individual circumstances of each case. Worry, responsibility on the one hand, and listless idleness on the other, have a most prejudicial effect. Attempt should be made to provide regular light occupation, involving, if possible, work in the open air. It should be interesting enough to distract the patient's attention from himself. Farming and various forms of gardening have been found most suitable, as even if fits occur, patients are less likely to injure themselves than when engaged in other occupations. An industrial colony has recently been formed at Chalfont in Buckinghamshire, where epileptics can be received and given suitable employment. The cases admitted have all been severe and chronic cases, and have been employed under direction, chiefly in market gardening. None of them had been able to follow any employment before admission, and the physical and mental improvement which has followed in the short time that has elapsed since the opening has been astounding.

The *diet* of patients should be simple and easily digestible. The appetites of epileptics are usually voracious, and they must be carefully prevented from bolting their food. Indigestion and constipation are two conditions which always aggravate the tendency to fits. The regular action of the bowels may be aided by introducing porridge, fresh and stewed fruit and brown bread into the daily dietary, and if this be insufficient more powerful aperients must be given so as to secure at least one daily action of the bowels. It has been claimed that an animal diet is injurious and that epileptics ought to live on a purely vegetarian diet. In a few cases a change to vegetarian diet has been followed by marked improvement, while in others the change has been for the worse, and the experience of institutions where the experiment has been tried on a large scale is that the most suitable diet for the average epileptic is one in which a moderate

quantity of animal food is allowed. Stimulants are rarely required, and should not be taken as a matter of habit by epileptics, as the least excess is followed by serious results. Tobacco in moderate quantity (an ounce and a half per week) need not be prohibited.

Any source of peripheral irritation should be searched for and removed. In a few remarkable cases fits have ceased at once after the expulsion of a tape-worm, the removal of carious teeth, the excision of a painful cicatrix, and the correction of errors of refraction. But this happy result of treatment is extremely rare. Usually all that can be hoped for from the removal of these excitants is an improvement, and our chief reliance at present must be placed on treatment by drugs; this is almost synonymous with saying the treatment by the continuous administration of considerable doses of one or other bromide over a long period. Which particular salt is of the most value is doubtful, but it is improbable that there is much difference between them. Bromide of potassium is much more extensively employed than any other, but in some cases the bromides of sodium, ammonium and strontium seem to be more efficacious. There does not seem to be any difference in the liability to produce acne, although in France this is claimed on behalf of the bromide of strontium; but although I have seen it largely employed, I have failed to notice any difference. To give some idea of the extent to which the bromides are employed, I may mention that nearly a ton and a half of the various bromides are consumed annually at the Queen Square Hospital for the Paralysed and Epileptic. They probably owe their influence to their direct action on the nerve cells, and not to the power of contracting the cerebral arterioles which they are believed to possess. There is no evidence that they are decomposed in the blood; or that free bromine is liberated, nor has the administration of the element by itself any marked effect in epilepsy. In some way by its continuous action it diminishes the excitability and instability of the nerve cells in the brain, the unregulated discharge of which causes an epileptic fit, just as in large doses it renders the reflex excitability of the cells of the spinal cord so feeble that the knee jerk becomes lost. For this purpose the dose must be considerable and a large dose—say thirty grains given once daily—appears to

have a much greater effect than a dose of ten grains given three times a day. The time and mode of administration must vary in individual cases. Where the fits do not occur daily, but at considerable intervals, a large dose—thirty or forty grains—should be given at night, with plenty of water. If, however, the fits occur more frequently and not at any fixed time, twenty grains should be given twice or three times a day. Smaller doses for an adult are of comparatively little use. In cases where the fits always recur at the same time of day a dose should be given a few hours before that time. The most common time for the fits to occur is notoriously shortly after rising, and the next in the early hours of the morning, and both of these are best controlled by the large nightly dose recommended above.

But although bromides are the drugs with which we can accomplish most in the treatment of epilepsy, it is by no means an ideal remedial agent. Such an agent is still to seek. The drawbacks to bromide treatment are:—(1) We meet with exceptional cases in which bromides cannot be tolerated, and in which some feebler substitute must be employed. (2) The liability to produce acne in many individuals. Although medically this may not be a very serious complication, socially it causes so much annoyance that patients often give up treatment rather than run the risk of keeping up the acne. In most cases the eruption can be stopped or rendered trivial by giving a few drops of Fowler's arsenical solution with each dose. (3) The loss of flesh which is a frequent result of the administration of bromides. This can nearly always be checked by giving cod-liver oil and malt extract. (4) In some cases the administration of the drug seems to cause mental dulness. There is no doubt that this does occur in some cases, but in most instances it is the epilepsy and not the treatment which caused the mental break-down. I have again and again seen cases at hospital where, despairing of a complete cure, patients have suspended all treatment for a year, and have then returned exhibiting the most pitiful contrast, with dull listless faces that told of a blank within, irritable and peevish, a change which would have been ascribed to the bromides. It is difficult to tell beforehand in which cases treatment with bromides is contra-indicated, but generally speaking, the effects of treatment are less satisfactory



in those cases in which there is marked mental impairment.

In many cases the bromides do not act as well by themselves as when given in combination with other drugs which by themselves have little influence in controlling fits, and of these digitalis, belladonna, nitro-glycerine and strychnia are the chief. The latter combination is often very useful when there is depression and dyspepsia, and affords an example of the occasional great value of the therapeutic combination of drugs which are supposed to have a physiological antagonism. It is not possible at present to say which combination will prove most successful; this has to be ascertained by trial.

Having found the dose of bromides, alone or in combination, which will control the fits, it is most important to impress on patients the paramount importance of regular continuous treatment for at least two years after the last fit, continuing to take at least one dose per diem. Patients are delighted at the cessation of the fits, imagine themselves "cured," and become careless about resuming their medicine. It is to neglect of this most important rule in practice that so many disappointing relapses are due, and it is owing to it that so many look on epilepsy as such a hopeless disease, for which the doctor can do nothing. In many cases, if the patient is wise, he will continue the treatment for years.

Where bromide does not produce any effect, borax in ten or fifteen grain doses may be substituted for it or added to it. It is rather insoluble in water, but is more readily soluble in a solution of bromide of potassium. Its effect, however, in most cases is seldom comparable to that of bromide. It tends to produce some gastric irritation and should be given after meals, freely diluted with water or milk, and it is often followed by rather painful eruptions on the trunk and about the mouth. As in the case of bromide rash, a few drops of arsenical solution will soon cause it to disappear.

*Surgical interference.*—Formerly setons and the actual cautery were credited with good effects, but their employment is now rarely resorted to. Simple trephining was some years ago credited with many cures. Probably it acted in the same way.

Where there is local damage to the brain, as from an injury, it has been proposed to excise the injured portion. I have

had the opportunity of seeing this done in a number of cases, in some with partial success. In nearly all the fits returned after a time, though less severe and extensive than before; but, since a large piece of the cortex must necessarily be removed, there is considerable resulting paralysis, and the advisability of such removal is still one about which there is great difference of opinion, and, where the fits are general, is rarely justified by results. (The treatment of epileptiform local fits is outside the scope of this paper.) In cases where the fits begin locally, for instance, where twitching of the thumb precedes the general convulsion by some minutes, an exploratory operation may be desirable, and in some cases a condition of the skull, dura mater or pia mater may be found, which has been exciting the fits, and with which the surgeon can safely deal, but if the cortex itself be extensively involved, I should, personally, be in favour of leaving it alone.

In bringing these somewhat desultory remarks to a close, I must apologise for dwelling rather fully on many elementary points in treatment. They are, I am sure, well known; I am afraid they are often neglected in practice. In the discussion to follow I hope that members will be able, from their longer experience, to give us further hints about the successful treatment of this chronic and obstinate affection.

*Dr. Alderson* did not quite agree with the reader of the paper that it was better to give a 30 grain dose of bromide, and that at bedtime, rather than grs. x. three times a day, nor that epileptic fits more frequently occurred in the night. On the contrary, he thought, and his experience confirmed his opinion, that epileptic seizures occurred more frequently during the daytime, when the patient was about his business, and this was what might be expected, as the exciting causes, such as worry, toil, or even alcohol, would be more likely to occasion a seizure than at night, certainly for a first attack or a relapse after a recovery. He never, during thirty years' practice, recollected being called up in the night to an epileptic fit (excluding a child, in which it was apparently due to dentition). It was difficult to estimate correctly the value of drugs in epilepsy, as very frequently one or two years, or even a longer period, elapsed without a second attack, although no medicine was taken in the interval. He had faith in bromides, and did not think tons of this drug would be used,

as it is, at Great Ormond Street if it were a useless remedy ; but he had greater confidence in abstinence from a meat diet (especially beef), in purgation, and in the relief from anxiety. He could confirm from experience the President's remarks.

*Dr. E. T. A. Boyton* : A young married woman became the subject of epilepsy since marriage. Her health had been pulled down by two quick-following pregnancies, and nursing husband through illness. Family history of tubercle, and rheumatism in other members of her family. Bromide of potassium prescribed had failed to give any benefit. As it had been pushed to its full extent under leading advice, a change became advisable, and it occurred to the speaker to try the syrup of the lactophosphate of manganese, with an immediate and, so far, maintained relief both from fits and in health.

*Dr. Shuttleworth* also referred to the benefits following the starvation treatment of the disease. He had treated cases with borax, but had found it inferior to bromide, and now he advocates the combination of the two remedies. He referred to the occurrence of alopecia after the use of borax.

*Mr. Menzies* referred to the old Scotch practice of burning a cock's comb and the parings of the patient's nails at the spot where the first seizure occurred.

*Mr. Bidwell* related a case of focal epilepsy, in which he had removed a portion of the motor area of the cortex ; the patient, now two and a half years after operation, was nearly free from fits altogether.

*Dr. C. Pope* referred to cases of Mènière's disease which were allied to epilepsy, and in which the patient is attacked with vertigo and falls down. These cases are not affected by bromide.

**Dr. Charles W. Chapman** read a paper on

#### THE ROLE OF ALCOHOL IN THE TREATMENT OF HEART DISEASE.

An observer of many cases of heart disease cannot fail to be struck by the well-nigh universal recourse to alcoholic stimulants by these patients as an indispensable part of treatment.



After making a fair allowance for cases in which the taking of alcohol in immoderate quantities is attributed to medical prescription, but are really independent of it, there remains a not insignificant proportion of patients who habitually consume a large quantity of spirit, apparently under professional advice. Whatever the true reason may be, the fact remains that many sufferers from various forms of heart disease take alcohol under the conviction, not only that it is a good thing for them, but that it is essential to their very existence. That alcohol is valuable in some cases, and on particular occasions, there can, I think, be no question, but I am thoroughly convinced it is a grievous error to order this stimulant in all cases. If it be true, as I believe it to be, that alcohol should never be prescribed except after full consideration, with a definite object in view, in measured doses and (as a rule) at stated intervals, emphatically is it so in the treatment of heart disease. A glance at the more common forms of cardiac disease will be a help in the discussion of this question. The degenerations affecting the myocardium, whether coming on in the course of an acute illness, or caused by the diminution of blood supply consequent upon atheromatous changes in the coronary arteries, lead to dilatation of the chambers of the heart. This is evidenced by a tendency in the patient to faintness, or actual syncope. The physical signs are increased cardiac dulness (unless pulmonary emphysema is also present), indefiniteness of the apex beat, and muffling, or even loss of the first sound. Such a patient, liable as he is to cardiac failure, should have a stimulant of some kind always at hand.

It is against the injudicious use of alcohol that I am anxious to protest. Alcohol, when not really needed, does mischief by unduly exciting the already weakened heart, and indirectly by interfering with the general nutrition, through the disgust for food which generally accompanies gastric catarrh of alcoholic origin. It must be remembered that an already congested mucous membrane is easily irritated. Patients of the above class are not uncommon in the outpatient room. They generally complain of having a weak heart. They have an alcoholic appearance, the true cause of which is confirmed by their own statement that "they take whiskey every now and then to keep themselves up." On

further inquiry it will be found that these patients have frequently an intolerable sinking sensation at the epigastrium. This sensation is often erroneously called fainting, and is considered to be an indication for the use of alcohol, whereas the symptom frequently owes its existence to excess in spirit-drinking. The histories of these patients show excess of some form of alcoholic liquor, extending, it may be, over many years—in fact, ever since they have, rightly or wrongly, got into their heads that they have “a weak heart.”

The beer-drinker is generally bloated in appearance, with a liver enlarged out of proportion to his cardiac difficulty, and he has much subcutaneous fat. The spirit-drinker, though sometimes fat, may be thin, and his liver may be even contracted. The symptoms in both classes, when there is degeneration of the myocardium, are practically the same, though the treatment may not be identical. The beer-drinker is perhaps more liable to pulmonary emphysema, which masks the percussion evidence of cardiac enlargement.

It would appear that excessive beer-drinking is directly responsible for some cases of heart disease. In a quotation from “*The Blätter of Klin. Hydrotherapie*,” in the *Lancet* for 1891, occurs the following:—“It is said that disease of the heart is very prevalent in Munich, where the consumption of beer amounts to 565 litres per head annually, and in the same place the duration of life in the brewing trade is shorter than that of the general population.”

The tremulous, flabby, or over-red tongue of the drinker is unfortunately too common to need description. When in addition to the ordinary signs of intemperance we have dyspnœa, which the condition of the lungs will not fully explain, degenerative changes in the heart and blood vessels should be suspected, and renal changes sought for.

The physician who thoughtlessly prescribes alcohol in these cases, or fails to define the dose and clearly state under what circumstances it may be taken, incurs great responsibility.

If food is better taken with a stimulant, and light wine is unsuitable, then half an ounce of brandy or whiskey in three ounces of water may be taken at meal-times. The frequent doses of alcohol should be stopped and a mixture containing ether and ammonia be used as an occasional stimulant; while

medicinal treatment should be directed towards the relief of the congested portal system. By these means the appetite returns and assimilation is improved, judiciously selected cardiac tonics completing the cure as far as possible.

Sir Thomas Watson, in his classical lectures (vol. ii., p. 273), remarks: "For that fatty ruin . . . . . much may be done even by drugs, and more by counsel and warning, for his safety . . . . . when syncope is threatened, diffusible stimuli may be freely used. Above all you must inculcate temperate habits and a life of constant quiet. . . . . These cautions are, indeed, more or less applicable to all cardiac disorders, but they are especially requisite whenever there is reason to suspect that the texture of the heart is infirm and incapable of bearing the stretching of a hurried or an impeded stream of blood."

#### CASE I.

T. O. C., aged 60, engaged in shipping, consulted me January 26, 1894. He complains of weakness of his heart, palpitation and giddiness on ascending stairs. The giddiness sometimes comes on in the early morning. He has been generally strong, and has had no serious illness. His present symptoms commenced eleven months ago. Examination of the lungs gave no evidence of disease. Cardiac dulness was generally increased; apex cannot clearly be defined. In the recumbent position the action of the heart is visible as gentle undulations, sounds feeble, no bruit. Radial arteries thickened and tortuous, no albumen in urine, liver a little enlarged, tongue furred. The patient, who had lived freely for years, had increased his allowance lately on account of his symptoms.

The amount of spirit was reduced to two ounces daily in divided doses with lunch and dinner. Strychnine and muriatic acid given.

March 1. Never giddy, feels better, heart's action stronger. Subsequent notes show progressive improvement.

Another class of patients who complain of weakness of the heart belong to what may be called the neurotic variety. These complain of præcordial pain, or of pain under the left breast, palpitation and irregular action of the heart. So convinced are these patients of the serious nature of their



complaint, and of the consequent necessity for alcohol, that they look quite disappointed when informed they have no heart disease, and are astonished when told that the very thing which they supposed had kept their heart going was responsible for many of its difficulties.

These patients are for the most part females, prone to feel their pulse every now and then. They are anæmic, have been working too much, or—what is more exhausting to the nervous system—have been pleasuring in excess. The former are generally large tea-drinkers; the latter, in addition to over-much tea, have perhaps been beguiled into taking so-called medicated wines, and from these insidious and dangerous compounds on to brandy, or even actual narcotics.

Such patients, when in the absence of organic heart disease they complain of palpitation and irregularity of the heart's action, require neither stimulants nor cardiac tonics.

Abstention from the cause or causes of the disturbed innervation of the heart, with the kind of rest requisite in each case, proper diet and medical treatment, will most tend to recovery of health.

In chlorosis, with cardiac dilatation, especially of the right side, where, as Dr. Foxwell has shown (*The Lancet*, 1891), the apex beat is abnormally high in consequence of the dilatation, and moreover there are signs of regurgitation through the mitral valve, the failing and weak heart does not simply require to be filliped with stimulant, but rather needs a minimum of work until its tone is sufficiently restored to enable it to take on full duty. Rest (even in bed), fresh air and sunlight if possible, together with light nutritious food, are the first essentials. Then if the tongue is clean and the bowels open, ferruginous, with possibly cardiac tonics, will in most cases lead to a satisfactory result. The heart shares in the general improvement, and, the valves now being competent, regurgitation ceases. In men, palpitation and irregularity of the heart are in certain cases caused by business anxieties, indigestion from hurried and irregular meals, excess of alcohol and of tobacco. To give these patients stimulants is only to add fuel to the fire.

In doubtful cases it would be wiser to withhold stimulants or give them very cautiously.

## CASE 2.

M. F. A., aged 32, has four children. She consulted me on February 5, 1894, for palpitation, giddiness under exertion or excitement. These symptoms are of four months' duration. No history of any severe illness. Patient goes a great deal into society; latterly she has got into the habit of taking brandy in the early morning, as well as during the day, to enable her to keep her engagements, and on her own responsibility has taken sulphonal at night to induce sleep. Of course there was little or no appetite.

As there was no evidence of organic disease in the chest or elsewhere, I suggested she should give up to a large extent her dinner parties and balls, and devote herself to the more wholesome home duties. No spirits were to be taken; she was to have beef tea with cayenne when the desire for stimulant came on, and bromide of ammonium to be substituted for the sulphonal. In three weeks the improvement was most marked; the cardiac symptoms had entirely disappeared; she is much less nervous. As for brandy and the mischievous sulphonal tabloids, she has "none of them."

## CASE 3.

E. W., aged 16, consulted me on June 14th, 1894. She complained of breathlessness on the slightest exertion, and of fainting attacks. Her pallor is extreme. The legs are greatly swollen up to the knees. Menstruation commenced three years ago; she was regular and well until seven months ago, when she was first noticed to be getting pale and weak. Has had no serious illness. Lungs good; heart enlarged, a soft systolic bruit at mitral and pulmonary valves; liver not down, urine contained a faint cloud of albumen, probably from admixture of vaginal discharge; no casts. Slight lateral spinal curvature.

She has taken iron, but with no benefit. Patient is an enthusiastic 'cello student. The mother was anxious to know whether stimulants were necessary. The treatment consisted of increased rest in bed; she was to lie on her back in the open air for two hours daily; light nourishing diet, no stimulants, and medicine to improve the colour of the blood. In

six weeks she was of a healthy colour and in good health. The heart sounds were normal, and the menses had returned. Ferruginous tonics with rest succeeded when the former alone had failed.

### *Aortic Stenosis.*

A patient having an aortic systolic bruit, but free from regurgitation at either cardiac orifice, and, moreover, if he has no syncopal or epileptic attacks, is not in a very sorry plight. His life may even be insurable, with some "loading" of the premium. The heart will probably have undergone salutary hypertrophy, and, provided extra strain be avoided, his heart need not trouble him. Would it not be absurd to prescribe measures having the avoidance of undue strain for their object and at the same time to allow the heart to be goaded on with stimulants.

These remarks apply with double force if adequate compensation has not been established, and there is reason to fear that the left ventricle is still yielding. Rest in the recumbent position, fresh air, and such tonics as strychnine and iron, with or without digitalis, is a line of treatment much more likely to lead to satisfactory results than by stimulation.

### *Mitral Stenosis.*

In this condition, although there is from the beginning great strain on the left auricle, the right ventricle is soon stimulated to increased effort, and hypertrophy of both chambers results. When the right ventricle is doing its utmost to urge the blood through the pulmonary circuit (the tension even leading at times to hæmoptysis) on to the already distended left auricle, and finally to the narrowed mitral orifice, it would be worse than useless to further excite the heart. Yet one comes across patients having this lesion, whose vital functions are being carried on fairly well, taking alcohol simply because they have been told they have "weak hearts." Smallness and feebleness of pulse may in some cardiac affections be indications for the use of some stimulant, but in the condition under consideration the left ventricle would not be found wanting if only it could get an adequate amount of blood to pump on.



*Aortic Regurgitation.*

Patients having aortic incompetency are specially liable to fatal syncope. Regurgitation through the mitral valve, indicating, as it often does, dilatation of the left ventricle, enhances this liability considerably. Alcohol is certainly a valuable item in the treatment of these cases. Careful discrimination, however, as to when this remedy is called for and when it would be injurious, is as necessary in patients of this class as in others of a less serious nature. I have seen cases benefited, and others injured, by stimulants, and I think it is a good rule to reserve their use for emergencies. My experience leads me to the conviction that, in the earlier stages at any rate, little or no alcohol is required.

If, associated with the valve lesion, there exists an atheromatous state of the arteries, undue excitement of the heart would tend to precipitate a fatal rupture of a weakened vessel.

## CASE 4.

Mrs. K., aged 55, came under my care November 18th, 1892. She complained of dyspnœa on slight exertion, rheumatic pains in various parts of the body, and attacks of palpitation.

Had rheumatic fever (after scarlet fever) at fifteen years, and again at thirty-six years of age. She has taken small doses of spirit frequently during the last ten years. She has been gradually getting worse, and now the least exertion brings on breathlessness and pain. Patient is stout, with a dusky, yellowish complexion. The heart is considerably enlarged downwards and to the left; action somewhat feeble and intermittent; there is a double aortic bruit, liver enlarged, urine free from albumen, pulse characteristic.

The amount of whiskey was materially reduced, and measures taken to improve the circulation and to relieve the congested viscera. In a short time, with the exception of a very small quantity at meals, no stimulant was taken.

Without pursuing in detail the progress of the case, suffice it to say that undoubted benefit followed the treatment, and that both her heart and general condition are much better now than they were two years ago.

*Mitral Regurgitation.*

A patient with this form of heart disease pre-eminently requires his treatment to be varied according to the exact condition he is in at the time of consultation. Alcohol should no more form a necessary item in treatment than that valuable, but much misused, drug, digitalis.

Dr. Bryon Bramwell\* remarks on the treatment of progressive mitral regurgitation: "Excesses of all kinds, more especially over-indulgence in alcohol . . . . . should be strictly forbidden." Later on, the writer states: "Alcohol is not necessary in this (early) stage of the disease; persons who have been accustomed to the use of wine or other alcoholic stimulants may be allowed a small quantity of alcohol, but the quantity should be strictly moderate; a larger amount is not only hurtful in itself, but, by producing a tolerance on the part of the system, robs us, in the latter stages of the disease, of one of our most effective therapeutic means of arousing the failing heart to greater energy."

## CASE 5.

A. R., aged 58, consulted me in March, 1892, for severe shingles, affecting the distribution of the right supra-orbital nerve. On examination of the chest, I discovered a loud mitral regurgitant bruit. The patient, observing I was examining his heart, remarked that he had had a murmur ever since an attack of rheumatic fever twenty-eight years ago, but, as it never troubled him in any way, he took no notice of it. He was a very active business man, and lived abstemiously. In this case there was doubtless perfect compensation, the loudness of the murmur being evidence of power in the heart muscle. He subsequently developed Bright's disease, with arterial rigidity, and in a year died of cerebral hæmorrhage.

Had this patient taken immoderately of alcohol, or heightened his blood-pressure with digitalis, it is very probable he would have succumbed earlier.

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\* "Diseases of the Heart," p. 468.

CASE 6.

*Mitral Regurgitation with Heart Failure.*

Miss S., aged 22, was seen on December 21st, 1893, in consultation with Dr. Dickinson, of Southfields.

Twelve years ago, when consulting Dr. Dickinson for some trifling ailment, a mitral systolic bruit was discovered. In the absence of cardiac symptoms, and of any history pointing to a cause for organic heart disease, the condition was presumed to be "functional." Early in 1893, on arriving home after a hurried walk, she had an alarming fainting attack, which initiated other symptoms of cardiac failure. I saw her eleven months afterwards.

On examination the heart was found much enlarged downwards and to the left; both lungs were deficient in resonance, especially at their bases posteriorly, with coarse crepitation. The heart was so tumbling about that the mitral bruit which had previously been noted could not be made out. Liver much enlarged, urine high coloured, but free from albumen.

The patient was propped up, and was breathing with much difficulty. Treatment which had been successful up to a recent period seemed to fail, and recourse to more stimulant appeared to be necessary, especially as nourishment caused nausea and vomiting.

Calomel in fractional doses was ordered, and measures for further treatment and nourishment agreed upon. It was arranged that the effect of abstention from stimulants, except when absolutely necessary, should be tried.

The patient remained in the same critical state for four days, after which time improvement slowly and steadily set in. Dr. Dickinson's last report, on September 24th, 1894, states that, "with the exception of her inability to go out of doors, the patient is very well. As regards the stimulants, I found she did very well without them; hardly any were given after you saw her, as no emergencies arose."

CASE 7.

*Dilated Heart from Strain after Influenza.*

R. S. J., a stockbroker of a nervous temperament, consulted me on September 15th, 1894. He complained of pain in the cardiac region, with aching down the left arm and dyspnoea on exertion.



He had influenza twice in 1892, and in February, 1893, he had his third attack. While the temperature was still high, he fulfilled an engagement to play in an amateur theatrical performance. His strength did not return; accordingly, after two weeks, he went on a visit to the Channel Islands. One day, while riding on the sands, the horse bolted for a distance of four miles. Although an experienced rider, the exertion and excitement were too much for him at that time. On dismounting he had pain in chest and faintness. The following day, feeling much better, he went for a walk, when, on ascending a hill, the pain and oppression in the chest were so intense that he had to stop where he was until a carriage was sent for him. The doctor who saw him said he had strained his heart.

On examination, the heart's apex was at fifth space nipple line; impulse feeble and diffused. A soft systolic bruit at apex, and heard nearly to left scapular angle. Other organs healthy. Though not prone to the use of much stimulant, he had taken more than usual since the heart symptoms declared themselves; he always carried a small flask of brandy in his pocket.

The first point in treatment was to assure the patient that he need not specially fear sudden death; further, that there was a fair prospect of his making a good recovery. In conjunction with other measures a "loafing" holiday was recommended, exercise short of fatigue, and abstention from stimulants, except a small quantity with meals. Improvement was gradual, and by January 16th (four months after first consultation) it is noted that he can go upstairs without inconvenience, and that the bruit can scarcely be heard.

Now, it is not claimed that the reduction of the consumption of alcohol was the sole cause of the successful issue in this case, but it can scarcely be denied that it was an important item in the treatment.

As a rule, in the history of cases of valvular and other serious forms of heart disease, symptoms of cardiac failure appear sooner or later. The action of the heart becomes weak and faltering, the contractions are frequent and ineffectual; dyspnoea is provoked by the least possible exertion, or is even a constant condition; the liver is enlarged, there is increasing oedema of the lower extremities, and probably albu-

minuria is present. In such a desperate case, hanging as it were between life and death, the most natural thing is to give stimulants freely, and sometimes this is all that can be done. If, however, the right side of the heart can be relieved by bleeding, or by a calomel purge, and stimulant only given when actually necessary, stagnation in the circulation is diminished, and an improvement in the symptoms may perhaps follow. The calomel may be given in a dose of gr. i. or gr. iii., or the same amount in frequently-repeated fractional doses.

The late Doctor Mahomed, the value of whose observations on the circulation is generally acknowledged, makes the following remarks: "It is not infrequent to find over-full vessels associated with a weak and failing heart; the pulse is then often small and feeble, it is very easily compressed, and is described as a small, weak pulse, which is thought usually to require stimulants; the reverse is, however, the case; bleeding or purging will be well borne by such patients, and the result will be most satisfactory."

The question as to how far stimulation may be advisable in an individual case or not, must be answered by the doctor in attendance. The existence of extreme cyanosis shows that the immediate difficulty is with the right side of the heart, and, consequently, this must at any rate be relieved. This having been accomplished, every effort must be made by appropriate treatment in diet to improve the muscular power of the heart. Alcoholic stimulants may be required, but it should be remembered they are not always necessary, and may even be harmful.

It will be seen that, though alcohol has its place in the treatment of some phases of heart disease, the necessity for it in all cases has been questioned, and unbridled license to the patient has been condemned.

The lay mind is as convinced of the need for stimulants in all heart cases as of the call for whiskey whenever a symptom can be in any way attributed to gout or rheumatism; in the latter case it is not over-difficult to successfully oppose the patient's belief, but where the heart is concerned it is at times well-nigh impossible to do so. Indeed, no small amount of courage may be required to enable the medical attendant to carry his point.

No rules for the guidance of the practitioner can be laid down—each case has its own individuality. Moreover, the symptoms in heart disease vary often from day to day, or even hour to hour, so that it would be the height of folly to attempt to dogmatise on so important a question. Routine is a snare to be guarded against in treatment generally; in cases of heart disease its consequences may easily be fatal.

*Dr. Symons Eccles* referred to the existence of dilatation of the left ventricle in cases of neurasthenia, and in such cases he found that the action of alcohol was advantageous, but, of course, its use must not be abused.

*Dr. Campbell Pope* drew attention to the use of the tincture of cactus in cases where the heart is beating forcibly, and which, therefore, are unsuitable for alcohol; he considered that the drug was of value.

*Dr. Chapman* replied.

**Mr. C. E. Bucknill** read a paper on

#### A CASE OF CASUAL COW-POX IN MAN.

On May 7th, 1884, G. S., a milkman, aged 24 years, employed at a dairy in Twickenham, applied for advice, complaining that for some few days past he had suffered from severe headache and prostration, with a general disinclination for work. His tongue was furred, and there had been a deposit of urates in his urine, but his appetite was good and he slept well. He also showed what he thought was a boil upon the flexor surface of his left forearm, which first appeared three days previously. It was somewhat elevated and slightly vesicular, but beyond a most feebly-marked areola and some tenderness and enlargement of the axillary glands, there was not much to indicate the true nature of the disease. About an inch above the vesicle a papule of small size was to be seen, and another about an inch below. These latter made their appearance on the two consecutive days after the first, but were too small to present any marked characteristics. On being questioned as to the condition of the cows he milked, nothing definite could be elicited, and he was told to observe whether anything unusual was to be seen on their teats or udders. The following morning he reported that there were



scabs on the teats of one cow, and when, a few hours later, I examined the animal in company with Dr. Marston Clark, the Medical Officer of Health, to whose courtesy I am indebted in writing this report, it was discovered to be suffering from a disease which was evidently cow-pox. On the ninth day after exposure to infection, and the seventh day after the eruption of the first papule, the three pocks on the man's arm presented a most typical appearance, especially the first, which was the largest and occupied the central position. There was well-marked induration and extensive areolæ of a bright rosy colour; the pocks were elevated, circular, and umbilicated, with a dull creamy white ring at the circumference. This dull creamy white colour, in place of the usual bluish-tinted pearl-like or silver-hued appearance of Jenner and other observers, may be accounted for partly by the presence of four excellent marks of primary vaccination, and partly by the fact of the epidermis being coarse in texture and less translucent upon the forearm (exposed to all weathers) than we are accustomed to find it in the upper arms of those we are called upon to vaccinate. The vesicles, on being punctured, were found, however, to contain clear fluid lymph, re-inoculation with which on this day, by its failing to *take*, proving that the disease had reached its crisis, which fact was further verified by the commencing formation of three crusts within the next twenty-four hours.

It is interesting at this point to note in operation the well-known law that successive inoculations with vaccine lymph upon different days in the same subject produce mature vesicles on one and the same day. Dr. Cory states that the primary vaccination with humanised lymph may be performed each day in the same case for a week, the seventh insertion running a rapid course of twenty four-hours and producing a vesicle equal in maturity to those of the first and all the intermediate days.

The somewhat unusual seat of inoculation is readily explained by the chapped and fissured condition of the skin of the arms, due to the liberal use of water in scouring the milk vessels and the prevalence of east winds at the time. G. S. intelligently narrated to me how, when the cow was restless whilst being milked the first day or two, he had to frequently shift his stool in order to avoid being knocked over, and

previous to resuming work would hitch up his shirt sleeves, his virus-laden fingers passing over the very site of the vesicles, and where the chapping and fissures had been most pronounced.

The history of the cow is unfortunately most imperfect and unsatisfactory. It had only recently been purchased (April 30) with another from a local dealer, and these were the only two kept at this particular dairy. Every effort to discover the district from whence the cows were imported proved abortive.

At the date of purchase there appears to have been no marked constitutional disturbance; the appetite was good, there was no horripilation, and the dairy-keeper assured me the animal was in excellent condition; on being milked, however, the teats were found to be very tender, and the milker several times narrowly escaped being upset, especially when *drying out*, as the teats are then pulled rather than milked, and the sores would naturally get somewhat roughly handled. At first the cow, which was stall-fed, gave sixteen quarts of milk daily, whereas, a few days later, after the decline of the disease, it commenced yielding eighteen quarts regularly, indicating, no doubt, that there had previously been some slight degree of pyrexia. The apparently healthy condition of the cow during an attack of variola, together with an appreciable diminution in the quantity of milk, are facts noted by Prof. Crookshank in his valuable papers on the "Wiltshire Outbreak," contributed to the *British Medical Journal* in July, 1888. The button-like crusts—for I regret that the disease was brought to my notice too late to observe it in the vesicular stage—were confined to the teats alone, being situated chiefly upon the two anterior ones. They were very numerous, some of them showing distinct traces of umbilication, and for the most part oval in shape, as Fleming says is usually the case in this situation, those on the udder being almost always circular. This difference, I think, is no doubt due to the vesicles on the udder being undisturbed, whereas those met with on the teats become ruptured at an *early period* by the hands of the milker, and give rise, by superinfection, to multiple coalescing pustules spreading downwards towards the free end of the teat. The fact of the long diameter of the pustule being parallel to the long axis of the

teat seems to substantially support this hypothesis. In the illustrations to Crookshank's papers, however, the crusts are more or less circular, and of a dark brownish-black colour. In the case under notice they were of a much lighter shade, and pale orange-brown or amber in colour. The cicatrices, seen a month after the separation of the crusts, were neither depressed, pitted, nor puckered, but smooth and shining, on a level with the surrounding skin, and of a pale flesh-coloured tint. Although milked twice a day by the same man, the second cow showed no further evidence of the disease beyond one small circular crust on one teat about the size of a split pea, which certainly would not have been recognised as cow-pox had it not exactly resembled in colour and configuration the pocks of the first animal. Taking into consideration the appearance of the crusts, and the circumstances of the case, it is very probable that both animals contracted the disease at the same time and from the same source.

Now the descriptions of this disease as given by various authors, bovine variola, differ considerably in regard to its local phenomena, and the diagnosis is by no means easy. Bonsquet, in his "*Nouveau Traité de la Vaccine*," writes:—"Not only do the general symptoms present no fixed type, but the local appearances themselves constantly vary, the disease always being the same; in the first place, the shape of the pustules is not always round, some are oval, others elongated; the former are flat and depressed, the latter globular, conical, &c. As regards the colour, some are white, others of a transparent or slatey-white, while others again are yellowish, copper-coloured, &c. It all depends even upon the colour of the teats. The areola may be present or not, the shade of the skin preventing us sometimes from distinguishing it. In short, not only are there differences in the character described, of the development, shape, nature, and progress of the pustule, but there is nothing which absolutely indicates true cow-pox, and nothing which excludes it. According to Verheyer, there is only one infallible means of diagnosing it, and that is by its anatomical structure."

Fleming also mentions this variable colour of the vaccinal pustules. In a series of articles in the *Veterinary Journal*, he says:—"If the skin is fine and white, the variolæ have a silvery-white, bluish-white, or slatey hue; if it is thin but



dark coloured, they are leaden grey ; if the hair is of a bright shade, they have a colour varying from a bright red to a pale or blood-red tint, but always wear a metallic lustre. On a thick white and wrinkled skin they have a dull opaline lustre."

To further convince myself of the correct diagnosis of this rare disease, I prevailed upon G. S., after repeated refusals, to consent to be re-vaccinated. Dr. Hime kindly sent me some reliable calf lymph for the purpose, and vaccination was attempted in four places, not one of which showed more than the slight topical irritation one might have expected.

As to the exceeding rarity of this disease, it is probable that many cases may crop up which are never brought to the notice of veterinary surgeons or medical men, and consequently escape being recorded. Bovine variola, not being scheduled in the Contagious Diseases (Animals) Act, it is only natural that cow-keepers and dairymen, not wishing their trade to be seriously affected, should keep the knowledge of the disease existing among their cattle to themselves, and in cases where a limited number of cows are kept and only one or two men employed to do the milking, the chances of confirmatory proof by casual inoculation are reduced to such an extent, especially when the primary disease is mild in character, as in the case of the second cow, that no one may have the remotest idea of its existence.

At the same meeting **Mr. C. B. Keetley** read a paper on

#### INTESTINAL AFFECTIONS REQUIRING SURGICAL TREATMENT.

In acute and subacute abdominal suppurations and intestinal obstructions, and in intestinal tumours, the result of surgical treatment depends mainly on the *time* of intervention.

In looking over the notes of my cases, I am first of all struck with the proof they give that medical practitioners as a body, including physicians, and with few exceptions even at this day, in 1895, regard surgery just as they did when I was a country doctor's pupil in 1868, *i.e.* as a last resource only, not as an excellent method of treatment to be selected dispassionately, and even welcomed warmly in suitable cases.

In other words, the successors of those mediæval doctors who sent for the barber to operate, now mix up the surgeon with the undertaker or with the priest, and send for him to give plenary absolution with the knife. I will first endeavour to prove this statement, an easy task, and then try to account for the fact—a difficult one, in which I hope for your assistance to-night. I will give you, with the utmost brevity, some pertinent facts—especially as to the stage of the case when surgery was invoked—from the first twenty abdominal cases, as it accidentally happens, nearly all private, which I have taken at random from notes lying on my table when this paper was written.

(1) Strangulation by band, acute symptoms of two or three days' duration.

(2) Pelvic suppuration allowed to riddle pelvic cellular tissues and anterior abdominal wall with sinuses. Hectic and emaciation.

(3) Recurrent perityphilitis whilst patient was travelling away from home. Surgeon summoned promptly this time on patient's return. But patient had passed through a dangerous period which he would have escaped had he been surgically treated on his first attack. An old concretion removed from abscess cavity. The medical man who attended patient in first attack no doubt still fancies he *cured* his patient with expectant treatment.

(4) Old pelvic abscess allowed to open into rectum, to burrow extensively, bring patient to death's door with prolonged hectic and form fæcal fistula, leading into both small and large intestines. It is fair to say that a surgeon was called in early in this case, but failed to find the abscess.

(5) Hepatic or post-hepatic abscess. Patient too exhausted to take anæsthetic. Exploration without anæsthetic; abscess missed.

(6) Acute general suppurative peritonitis from perforation twenty-four hours before. Symptoms quite masked by opium.

(7) Ditto of several days' duration. Patient moribund.

(8) General septic peritonitis from perforation of (probably typhoid) ulcer four days before.

(9) General suppurative peritonitis from perforation (probably tubercular) four days before, in a patient with pulmonary tuberculosis, and twelve months' history of night-sweats.

(10) Peri-hepatic abscess due to perforation of either stomach or duodenum, opened into pleura and thence into lung and bronchi. Septic pneumonia.

(11) Suppurative peritonitis, tympanitis, great distension, semi-moribund state, history pointing to perforation of cæcum or appendix, several days before.

(12) Retro-peritoneal hernia with intussusception, gangrenous.

(13) Volvulus. All the intestine visible through an incision from Poupart's ligament up to edge of ribs, gangrenous. One gangrenous coil extended as far as left hypochondrium. This patient had a right inguinal hernia, which though it proved to have nothing to do with the case, might at least have suggested early surgical intervention.

The other seven cases have less bearing on the point in question. They were :—(1) Cancer of pancreas. (2) Appendicitis, sub-acute; formation of abscess watched by surgeon and opened. (3) Appendicitis watched by surgeon; no operation needed; slight fever and small tumour, quickly subsided. (4) Recurrent appendicitis. Originally powerful young man, had lost two stone in weight in two years. Attacks very frequent. Appendix removed. Three shot found outside it and one within. (5) Recurrent appendicitis; abscess opened and drained. (6) Iliac suppuration, diagnosed by all, including myself, as due to appendix. History of previous attack; physician advised against operation, another physician and medical attendant strongly for operation, which was performed. Case proved to be a broad ligament cyst full of putrid pus, not adherent to parietal peritoneum, and with a soft thin wall ready to burst into either peritoneal cavity, or into adherent intestine, or into both. (7) Gumma of omentum, &c., adherent to sigmoid flexure; laparotomy rectified diagnosis, which had been quite wrong. All these seven cases, except the malignant one, recovered.

I have taken these twenty cases of general abdominal surgery at random exactly as they came to hand, and they may accidentally give a somewhat too gloomy picture. But they prove conclusively that we should ask ourselves the question, Does it really take twenty-four hours, two, three, and even four days to decide whether an acute abdominal case is fit for surgery or not? and if so, why?



In some of the cases delay had occurred while the patients or their friends tried castor oil or other domestic medicines, but generally the family attendant, or a physician, or both, has been summoned in reasonably good time.

With regard to the difficulties of the general practitioner, he has in the first place to deal with old prejudice against the knife—prejudice which the public still cling to, though not to the extent which some think. It is notable how small a proportion even of hospital patients shrink when an operation is suggested. Most welcome it as a short cut to health. It was not so fifteen years ago. Too many then remembered relatives or neighbours who had died of operations. In some of the above cases the sufferer's friends, impatient at seeing him grow worse from hour to hour, or from day to day, without any serious attempt to relieve him, had changed their doctor, and the new one had, perhaps quite promptly, though too late, called in the surgeon. But practitioners have not always the courage of their convictions. It is a pity, for procrastination born of timidity does no good to the doctor. A general practitioner, a friend of mine, subject to the keenest rivalry, recently in one month diagnosed two cases of intra-abdominal suppuration, and one of intra-cranial, and had them surgically treated, in one of the three cases sustaining his views firmly and successfully against a leading physician, and in the other compelling the patients to have a surgeon of his choice, not theirs. Surely such a combination of knowledge and courage must command success in our walk in life as it would in any other.

Again, in a case of suspected peritonitis or intestinal obstruction, the medical man may fly to his text-books, or at least to his recollections of medical teaching, which will mislead him, as their teaching is based upon the physician's experience of surgery applied to cases such as the first thirteen I have just briefly noted. Or he will call to mind various, perhaps numerous, cases of perityphlitis which he will fancy he has radically cured by rest and opium, although at least a minority of them—sometimes not small or unimportant—will have recurred and gone to some other doctor, or perhaps to the grave, all unknown to him. I neither recommend nor practise operation on all the cases of perityphlitis I see; but I think the man who may have to operate should have an

early voice in the selection of his cases, and not simply have handed over to him another person's experimental failures. Greig-Smith hits the mark exactly when he says the beginning of an intestinal case, not the end, is the time to put the question, "Is it one for surgical treatment or not?" and in *acute* cases it is also the time to answer that question.

The answer is not always easy to give. Nevertheless, in looking over notes, very few of the cases seem to have been really doubtful even from the first. Sudden, acute abdominal pain, perhaps causing faintness or even collapse, vomiting, coldness, rapid supervention at least of a certain degree of tenderness, and tympanites, seldom mean a mere passing indisposition. The previous history sometimes plainly suggested the probable nature of the case. And the formation of a large, deep, firm swelling in the right inguinal region, perhaps extending nearly to the umbilicus, accompanied by fever, perhaps even by a rigor or two, almost certainly means the presence of pus, the destination of which, whether absorption, or escape into intestines or even general peritoneal cavity, is not precisely under the control of the physician; while the very nature of this tumour, as I have just shown, may be something quite different from, and more serious than, a suppuration arising from appendicitis.

The question of enteritis, or summer diarrhoea, may arise in some early cases, especially in children; but I notice that of thirteen children admitted with peritonitis or intra-abdominal suppuration under me at the West London, ten were attacked either in mid-winter or early spring; and the diagnosis admitted no possible doubt in the remaining three, which occurred in June and July. In short, each case required, for its early rough diagnosis, not twenty-four hours' waiting, but, at most, half-an-hour's observation and inquiry, with, say, a quarter-of-an-hour's thought. Of course I know well how difficult it is for a busy practitioner, perhaps taking small fees, or possibly rushing from house to house in an influenza epidemic, to spare even half-an-hour for one visit. But the cases in question merit it. One of the most effective ways of making a diagnosis difficult, if not impossible, is to administer opium before knowing what is really the matter. Let me repeat that many cases treated in orthodox fashion as examples of perityphlitis have nothing to do with either the

cæcum or the appendix. I have mentioned one suppurating broad ligament cyst. I have notes of bone abscesses due to acute necrosis (not tubercular), and of one striking sub-acute and septic glandular suppuration, which could neither have been detected nor cured without surgery, and, in women, tubal and broad ligament troubles are an occasional source of error.

Conversely (in May, 1889), I admitted a woman, aged 62, with advanced diabetes into the West London, and dying of diffuse cellulitis of the right abdominal wall. She was suffering from the effects of a large perforation of the cæcum at some distance from the appendix, which, however, was gangrenous. She had no peritonitis. Diagnosis could only have been possible in this case at an earlier stage.

The rest of my paper I will devote to a few remarks on *intestinal tumours and their removal or palliation*.

The usual form of palliative treatment is now inguinal colotomy. The vast majority of cases of intestinal tumour which receive surgical treatment are submitted to this operation, and a very good one it is so far as it goes.

But nearly every case in which it is performed is an instance of long-deferred or false diagnosis, where a true and early diagnosis followed by a radical, and not a palliative, operation was possible, even if difficult.

I will not dwell on rectal cancer. The last case of this for which I did a colotomy had been treated medically for twelve months without a single digital examination. The pelvis was completely blocked with new growth.

It is to more deeply or rather more distally placed intestinal tumours and malignant ulcerations that I would draw your attention. In diagnosis, these bear a relation to rectal cancer similar to that borne by internal strangulation to strangulated hernia. In other words, the general symptoms are alike, but the local ones less easy to detect. Nevertheless it is not so much difficulty of diagnosis which causes so few of these cases to come to successful radical operation, but rather (1) the practice of prescribing for obscure abdominal cases without making a thorough local examination, with inspection and palpation; and (2) the too frequent custom, even when a tumour is found or suspected, of waiting for various reasons, such as for the diagnosis to clear up, or in the hope that the lump



may be faecal and disperse, or in the idea that intestinal surgery is a desperate thing only fit to be practised by physiologists on dogs.

This Society has done a good deal to check the practice of prescribing without proper examination and care in diagnosis by the firm way in which, from its origin, it has discountenanced those extremely cheap forms of practice in which want of time makes diagnosis impossible.

We are then left to inquire how far is the surgery of intestinal tumours a desperate thing? The excision of an intestinal new growth, reasonably small, but still large enough to both cause symptoms and to be more or less evident to careful palpation through an abdominal wall of average thickness, is not desperate, and, as a rule, it has not proved even difficult. Can anyone doubt this who knows the modern practice of colotomy, in which a large segment of intestine, much longer than that connected with a small tumour, is occasionally cut away merely in order to improve the character of the artificial anus? This proceeding seems to be carried out with impunity. But it may be argued that no intestinal suture with prospect of intra-peritoneal extravasation is involved in it. The dread of intra-peritoneal intestinal suture has perhaps arisen from the enormous number of ways of doing it which have been invented, each suggesting that the others were unreliable. Czerny said with truth that what is wanted is not so much new modes of suture, as increased individual familiarity and consequent skill in using known modes. What is the nature and degree of the skill required? It is lower than that displayed by a good journeyman tailor in sewing a sleeve on a coat. One of the best and simplest methods, that of Dr. Widenham Maunsell (a tumour removed successfully by his method of enterectomy, modified to suit special circumstances, is on the table), is an adaptation of the very plan pursued by the tailor in the piece of sewing just mentioned. The cut ends of intestine are united at the mesenteric border and opposite it, respectively, by two sutures whose ends are left long. These ends are then carried inside one piece of intestine and out through a button-hole in its wall. Pulling on them causes an artificial intus-susception, which comes out through the button-hole. Now the cut edges of intestine are seen in exact apposition.

forming two concentric rings, one inside the other. They only need to be united by interrupted sutures, passed carefully but boldly—not with any finicky trouble to take up serous and muscular without mucous coat, as with Lembert's sutures—in order to make a perfectly water-tight and a reliable junction. Lastly, the intus-susception is pulled back, and the small button-hole closed with Lembert's sutures, or with a continuous suture.

The method of intestinal union which has of late years attracted most attention is that with Professor Senn's plates, which are well suited for lateral anastomosis, but have in some cases marked drawbacks.

Other ingenious methods with which excellent results have been achieved, and which might be classified with Senn's plates, are Mayo Robson's bobbins and Murphy's buttons. And Professsr Baracz has shown experimentally that excellent plates for intestinal anastomosis can be cut out of the swede-turnip.

But it is not necessary to go minutely into this extensive subject of methods. I wish merely to persuade that, if the physician or the practitioner will only find reasonable grounds for suspecting intestinal tumour in a case, the surgeon can not only verify the diagnosis, but remove the disease in a reliable, simple and thoroughly hopeful manner.

*Mr. Edwards* mentioned a case of excision of rectum by Kraske's method in which he attempted to join the cut ends by means of Murphy's button; the anastomosis was not successful, but the patient made a good recovery. He pointed out how satisfactory was the prognosis in cases of excision of rectal cancer, if the case was operated on sufficiently early.

*Dr. Chapman* called to mind many obscure abdominal cases which had recovered without operation; he doubted whether it was any use to operate on cases of intestinal cancer on account of the risk of recurrence.

*Mr. Bidwell* could not agree with Dr. Chapman, and referred to two cases of removal of intestinal cancer, one from the cæcum, the other from the sigmoid flexure, which were alive four and eight years after the operation respectively. He considered that the hesitation which physicians showed in handing over obscure abdominal cases to a surgeon was due to the fear of death from peritonitis. He pointed out that

there was very little risk of this, and referred to twenty-nine laparotomies which he had done, in none of which there was any peritonitis, although four deaths occurred from other causes. Finally, he agreed with Mr. Keetley in recommending Maunsell's method of intestinal anastomosis, and related a case where he had recently successfully resected five inches of small intestine by the method. For lateral anastomosis he recommended Halstead's method, and referred to two cases of gastro-jejunosomy which he had performed by that method.

*Dr. Roberts* related a case of tubercular peritonitis in which, although an abscess formed and was allowed to burst, the patient recovered.

*Dr. Clemow* considered that surgical treatment would have been beneficial in *Dr. Roberts'* case.

*Dr. Maunsell* described his method of anastomosis. He advised the use of a piece of sponge, over which is passed a safety pin, as an intestinal clamp.

*Mr. Keetley* replied.

Meeting held Friday, March 1st, 1895. The President, Dr. R. J. Banning, in the chair.

## CLINICAL EVENING.

### GALL-STONE COLIC—OPERATION.

Mr. CHARLES A. BALLANCE: Mrs. B., aged 56. *March*, 1888. First attack of severe hepatic colic,—agonising pain, vomiting, collapse; no jaundice. Many attacks since. Pain and vomiting for ten days previous to admission to St. Thomas' on June 14, 1894. Condition then serious. Temp. 100°; pulse 110, very weak. Face pinched and anxious. Very tender oval tumour in region of gall-bladder discovered. *Immediate operation*, gall-bladder found very tense, large, bright red in colour, and covered with lymph in patches. Tumour incised; eighty-five gall-stones removed, mucous aspect ulcerated. Edges of wound in gall-bladder very soft and friable, making the stitching of them to the skin by no means easy.



Rapid convalescence—nothing to note.

*Mr. Bidwell* remarked that, in most cases of cholecystotomy it was preferable to stitch the gall-bladder to the peritoneum and not to the skin.

#### CEREBELLAR ABSCESS.

*Mr. CHARLES A. BALLANCE:* The patient, aged 15, had chronic otorrhœa for nine years. Admitted to St. Thomas' with a five weeks' history of headache, staggering, vertigo, vomiting and nystagmus.

*Condition on admission.*—Thin, pale, evidently very ill; curled up on left side in bed; drowsy, resents being moved. Complains of severe occipital headache, vomiting, vertigo, and diplopia. On examination, both eyes deviated to left, nystagmus. Early optic neuritis, pupils normal. No facial palsy. Right ear foetid (slight) discharge. No mastoid signs. Right arm very weak. Right knee-jerk markedly brisk. Temp.  $96.2^{\circ}$ , pulse 56.

*Immediate Operation, May 11th.*—Stacke operation on mastoid and evacuation of 3ss of pus from anterior part of the right lateral lobe of cerebellum. All symptoms relieved as result of operation.

20th.—All symptoms returned.

27th.—Blood collection evacuated in posterior part of right lateral lobe of cerebellum, due probably to a hæmorrhage into an area of septic softening.

30th.—From this date gradual convalescence. During illness breath foul and motions very offensive; in convalescence appetite ravenous.

*Dr. Alderson* remarked that the symptoms produced by cerebellar abscess were often quite indefinite and resembled those of typhoid fever or meningitis; he remembered a case which was diagnosed as typhoid fever, but, at the *post-mortem*, a cerebellar abscess was found.

*Drs. Maidlow, Pegler, Eccles, and Lake*, also took part in the discussion.

#### LACERATION OF KIDNEY—NEPHRECTOMY.

*Mr. EDWARDS:* This patient, aged 55, on February 23rd fell from a third story window on to some spiked railings,

causing a punctured wound in the left lumbar region, just below the twelfth rib. Copious hæmorrhage.

*Operation.*—Loin incised. Eleventh and twelfth ribs found fractured, and the kidney was found to be nearly severed in half, and otherwise much lacerated, and so was removed.

No wound of the peritoneum was seen. Ligature of the renal vessels at once stopped all hæmorrhage. Patient is doing well. He soon rallied.

*February 24.*—22 ounces of urine passed.

„ 25.—32 „ „

„ 26.—43 „ „

„ 27.—45 „ „

Urea, gr. xi. —  $\frac{3}{4}$  j.

He also showed the ruptured kidney which he had removed from the man. The kidney had been transfixed by the spike and was ruptured completely.

*Mr. Keetley* referred to a case of laceration of kidney where he had removed the lower half of the organ. The bleeding was controlled by packing the wound with sponges which were removed on the day after the operation.

#### BRADYCARDIA.

*Dr. J. B. BALL:* This patient, a fairly-nourished man, aged 40, somewhat pale, has been under observation since the middle of last December, during which time his pulse-rate varied between 26 and 30 per minute. The history is that he had good health till January, 1894, when he had influenza. He had a “relapse” in February, 1894, and continued very weak for some months. He was well all last summer, and pursued his occupation of a carpenter until the middle of September, when he began to suffer from breathlessness, dizziness, and faintness on exertion. These symptoms continued, and obliged him to give up all work in December. The heart’s impulse is rather feeble, and is felt in the fifth space in the nipple line. There is, at times, a systolic bruit to be heard over the precordia, most marked at a point a little internal to the apex. The urine contains a trace of albumen, but is of normal specific gravity, and no casts have been found. The patient indulged rather freely in alcohol up to seven or eight years ago, but says he has been very moderate of late years.

*Dr. Chapman* considered that there was fatty degeneration of the heart.

#### WIRING OF FRACTURED PATELLA.

Mr. EDWARDS showed two cases of fracture of the patella which he had wired four and six weeks ago respectively. He operated by a lateral flap and hammered in the ends of the wire; the splint was removed at the end of a fortnight. The movement of the joint was excellent in each case.

*Mr. Eccles* noticed that in both these cases the injury was due to a fall on the knee, and stated that transverse fractures with separation of the fragments followed direct injury much more often than was formerly supposed.

#### EPISPADIAS.

Mr. EDWARDS also showed a boy with epispadias affecting the glands and a portion of the corpora cavernosa. He regarded the condition as congenital, but suitable for operation.

#### DISPLACEMENT OF HEART.

Dr. CHARLES W. CHAPMAN showed a girl, aged 12, with displacement of the heart into three-quarters of an inch outside the right nipple, due to contracted lung. There was hyper-resonance over the entire left chest from compensatory emphysema, while the right side was dull from the third rib downwards in front and universally dull behind. On auscultating the right side anteriorly there was bronchial breathing, with a few crackles on deep inspiration, to the level of the third rib, while there were coarser moist sounds lower down. Behind there was bronchial breathing and whispered pectoriloquy; the latter ascended in the musical scale as the stethoscope was moved downwards. The right chest measured half an inch less than the left, and there was a spinal curvature. He considered the condition to be due to contracted lung from fibroid changes consequent upon pleuropneumonia.



## SYPHILIS.

Dr. P. S. ABRAHAM: This patient, a man aged 39, had a chancre about twenty years ago, and he says he also had soft sores some few years afterwards.

At present, he exhibits a superficial ulceration on the side of the neck, with typical serpiginous border, ulceration of the mucous membrane of the lips, and a large superficial ulceration on the left thigh, which has been there for about two years. This patch is very itchy, pigmented in its healing part, and also more hairy than on the corresponding part of the opposite limb.

The man is a seborrhœic subject, and the question might be raised as to whether the condition of the large patch is not complicated by eczema.

## MYXŒDEMA WITH ENLARGED HANDS.

Mr. L. A. BIDWELL: For the last two years the patient, aged 19, has noticed enlargement of the hands, which becomes worse in winter, but does not entirely disappear. For the same time she has showed symptoms of myxœdema. Her face has the characteristic colour, and she is slow to answer questions. No thyroid gland can be felt. She has six sisters, all of whom are healthy. She was born at Norton, near Bury, and lived there till the age of 15. She then went to Ipswich, where she remained two years. Her symptoms have only been noticed since she has been in London.

The left hand is much more enlarged than the right, and there appears to be some enlargement of the bones of the phalanges. There are a number of warts on the backs of both hands, and scars of old ulceration. The skin is cold and œdematous.

## MUSCULAR ATROPHY (? PROGRESSIVE).

Dr. BUCKLAND: The patient, C. W., aged 29, was quite well and in good health till about nine years ago, when he first noticed that he was clumsy in picking up pins, money, and similar small articles; that he began to lose flesh, the hands and legs especially gradually becoming thin and wasted. Attended at St. Bartholomew's, and was treated "with battery" at that time.

Has gradually, but *very* slowly become worse, but so slowly that he has scarcely noticed the progress. Has never had any pain which he can associate with the wasting, though at night cramp in legs has been frequent.

Has not lost strength in the way of lifting heavy weights, but is still awkward with his fingers in handling small articles. Catches his toes in ground when walking, and has fallen sometimes in consequence.

*Sensory*.—No pain, numbness or tingling either in hands or legs. Sensibility to touch, heat, tickling; pus normal. Sight, hearing, &c., normal.

*Motor*.—Organic reflexes absent both sides. Co-ordination good.

E.C.F.—Left hand, no response in interossei nor in muscles of thumb; right hand, twitch present, but very —; legs, absent in tib. ant. both right and left.

E.C.G. not obtained in any muscles above named, except interossei of right hand, where K.C.C. > A.C.C.

*V. m. and Nutritive*.—G.V. hands and legs; no wasting of shoulders apparently. Cramp at night. Infra-spinatus?

#### PRIMARY CHANCRE OF LIP.

Mr. KEETLEY showed a case of primary chancre of upper lip in a girl, aged 18. There were some enlarged glands, but no rash, nor sore throat. The patient was improving under mercurial treatment. Mr. Keetley also showed a woman, aged 50, who came under his care with eczema of the nipple and a chronic abscess in the breast. The abscess was surrounded by cicatricial tissue, which resembled scirrhus; it was dissected out and the breast is now quite free from disease.

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Meeting held April 3rd, 1895, the President,  
Dr. R. J. Banning, in the chair.

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**Mr. Stephen Paget** read a paper

ON THREE CASES OF SECONDARY MALIGNANT  
DISEASE OF THE PLEURA.

From the point of view of pathology, these cases are not all alike, nor are they all complete ; but from the point of view of practice they had a common interest, and seemed more alike than they really were. In the first case, the diagnosis is happily not yet quite certain. In the second, there was no *post-mortem* examination. Still, the cases were practically so much alike that I have ventured to keep them together.

CASE I.—Miss A., aged 34, came under my care on January 3, of this year. For four years she had observed a lump in her breast. In the upper and inner part of the right breast was a small, tough, ill-defined nodule, and at one or two other points the breast felt rather tough and hard. The skin over the breast and the nipple was healthy, and there were no enlarged glands. I removed the breast two days later, and I should like to say a few words about the operation. She very much wished that some part of the breast should be spared. So the incisions were made high up, the lower one just avoiding the nipple ; then the whole of the breast was dissected out, leaving a very large lower flap of skin only, like a big watch-pocket, having the nipple on its free edge. This pouch of skin was drained by a counter opening, and the wound healed well. I have also used this method in a case of general cystic degeneration of the breast. To many women, the removal of the whole breast seems a sort of outrage, bringing with it some loss of honour or of sex ; and the knowledge that the nipple is still there, and the sensations that it still excites, may just save a nervous, high-strung patient from drifting, after the operation, as a patient of mine once did, first into melancholia and then into insanity.

On March 18, only ten weeks after the operation, Miss A. showed me a minute recurrent nodule, no bigger than a pea, in the subcutaneous tissue, above the inner angle of the scar.



Her general health seemed very good, and I advised that the nodule should be removed at once. But I had the benefit of Dr. Douglas Powell's advice on the case; and he found reason to fear that the pleura was already involved. Over the lower part of the lung, about the axillary line, there was a faint creaking sound on respiration, as if from some thickening of the pleura; and the movements of that side of the chest and of the lung seemed slightly impaired. But it was just possible that these signs might not be due to cancer of the pleura. Where the breast had been there was now a thin rigid stretch of skin. This might cause the loss of movement and of expansion, and the friction sound might possibly be due to an old pleurisy, or to some simple thickening of the pleura after the operation. It was thought best, therefore, to give her "the benefit of the doubt," and the recurrent nodule was removed, with part of the pectoral muscle.

With regard to this case, I should like to observe first that the rapid return of the disease was not due to the non-removal of the nipple and of the skin over the lower part of the breast. These remain healthy; the disease returned high up, above the line of the scar. Next, that the signs of disease of the pleura were so slight that Dr. Powell established their presence only after prolonged examination. I had not even suspected anything of the kind, having made the common mistake of looking at a surgical case from a merely surgical point of view.

CASE II.—Miss B., aged 55. In March, 1890, I removed the right breast, and part of the pectoral muscle, for a large mass of cancer, which had already made its way deep into the muscle. In November of the same year, I removed two small recurrent nodules near the sternal end of the scar. In April, 1891, she began to complain of shortness of breath, and of pain and difficulty in getting upstairs; and Dr. de Havilland Hall found signs of a very extensive pleural effusion. The case is of interest on account of the great relief that was given by repeated aspiration. The chest was aspirated five times in the next five weeks; the quantity of fluid varied from thirty to fifty-three ounces; it was always bright and clear, never tinged with blood. At the last aspiration, three days before her death, she seemed so near death that I hesitated to do it; but it gave her great relief, and only a few hours before

she died she was begging to be tapped once more. She used to drop asleep after being tapped, almost as soon as the needle was withdrawn. The same immediate sleep often follows tracheotomy, and it has also been noted in several cases of puncture of the abdomen for the relief of acute distension; in a case where I did this on several occasions, I have seen the patient go to sleep even before the needle was withdrawn. This sleep is so sudden that it can hardly be due to the mere relief of the patient from distress or pain. Nor is it easy to see how the return of the lungs to their proper activity can produce it.

CASE III.—A girl, aged 14, was under my care in the Metropolitan Hospital in January, 1894, with subperiosteal sarcoma of the lower end of the right femur, and I amputated the limb through the middle of the thigh. The tumour was a mixed sarcoma, containing spindle cells, myxomatous tissue, and cartilage, and was partly calcified. I saw her from time to time during 1894, and she kept in good health: once she complained of some pain in her left side, but this soon passed off. In January of this year she was seized with a sharp pain in her left side, and shortness of breath; and her medical attendant found all the physical signs of pleurisy with effusion: but she had no cough, no rigor, and but little pain. After some weeks at home she was admitted to the Hospital. The heart was pushed far over to the right of the sternum, and there was every sign of a huge effusion into the left pleura. The veins over the chest wall were not dilated; the left leg was not œdematous. Nothing but blood was drawn on aspiration: but a flake of tissue came away in the eye of the needle which, under the microscope, showed small round cells. A few days later, under ether, an incision was made through the pleura, and we found we had to do with a huge solid growth. The patient nearly died on the operating table: for ten minutes her breathing was almost at a standstill, all the accessory muscles of respiration tugging at the ribs without lifting them. Happily, I thought of giving her oxygen, and this revived her. She lived about a week longer, without much pain, and the use of oxygen never failed to relieve her dyspnœa.

The specimen shows an enormous mass of disease: the left lung was almost gone: only the uppermost part of it can still

be seen, and this part was hollowed out into a large cyst full of blood. A huge osteo-sarcoma filled the whole cavity of the left pleura, and showed the print of the ribs, diaphragm, and left kidney, like plaster of Paris run into a mould. The disease had also invaded the anterior mediastinum, the base of the right lung, the lower ribs on the right side, and the spine. There was also fibrinous pericarditis.

The chief points, therefore, in this case are :

(1) The rapid recurrence of the disease, though the microscope showed no specially malignant tissue in the primary growth. Ought the surgeon, in subperiosteal sarcoma of the lower end of the femur, to remove the whole bone, either by primary amputation at the hip, or by first amputating through the thigh, and then, a few weeks later, removing the rest of the bone by Furneaux Jordan's method ?

Some years ago I amputated through the thigh for this disease in a young girl; it recurred in the stump, and I removed the recurrent nodule; it recurred again, and I amputated through the hip-joint. This last operation was nearly four years ago and she is still in good health. But one case proves nothing; and there is a paper by Börck\* on amputation at the hip-joint for sarcoma of the lower end of the femur, in which he says: "Out of 87 cases thus treated, I have not as yet found a single case where it is certain that a permanent cure was effected."

(2) It is worth noting that the disease began on the right side of the body, but recurred on the left side.

(3) Except for the fact that she had been the subject of malignant disease, there was nothing to suggest that the case was not one of simple pleurisy. Her illness began with a sharp pain in the side, and a catching of the breath. The only difference was that she had no cough at any time. The physical signs were those of pleurisy; and she had no dilated veins, no hæmoptysis, no signs of pressure on the deep veins or lymphatics.

(4) The inhalation of oxygen gave her great relief. I believe that it saved her life on the operating table, and it was of the greatest comfort to her during the few remaining days of her life.

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\* Deutsch. Ges. f. Chir., 1890.



(5) As a last resource, we tried the fluid which Coley, of New York, uses for injection into sarcomata that are past operation. His method is described at full length in the last number of the *Transactions of the American Surgical Association*. It is based on the fact that an attack of erysipelas in the neighbourhood of a malignant tumour has, in some few cases, been followed by decrease, or even by disappearance, of the tumour, and some German surgeons have treated cancers of the breast, past operation, by inoculating them with erysipelas, but several patients have died of this treatment. Coley tried filtering off the bacilli of erysipelas from the nutritive fluid in which they have been cultivated, and injecting this fluid into the tumour, thus using the products of the bacillus, but avoiding the rash which follows inoculation with the bacillus itself. Later on, he found that he got better results if he used the nutritive fluid in which two different organisms—the bacillus of erysipelas and the bacillus prodigiosus—had been cultivated side by side, and this is the fluid that he now uses, a sterilised broth containing the toxins of these two organisms. His results are certainly full of interest, but other surgeons have failed to get any results at all. The method is still on its trial, but it deserves to be carefully tried, however little hope we may have of it, nor can anything be said against it because in this particular case it did no good.

In submitting these three cases to the Society, I should like to say:—

(1) They illustrate the value of a medical opinion in a surgical case, and of a surgical opinion in a medical case. In the case of the first patient, the surgeon neglected to examine the chest; in the case of the third patient the physician took no account of the fact that she had been through a surgical operation for malignant disease.

(2) They raise two questions as to diagnosis. Is there any sure sign of infection of the pleura in its earlier stages? And is there any sign by which we can make a certain diagnosis between a large solid tumour of the lung and an effusion into the pleural cavity?

(3) They suggest certain methods of treatment which may be worthy of discussion—the influence of a more sweeping and more dangerous operation for the primary disease—the value of repeated aspiration, and of the administration of

oxygen, to palliate the miseries of the recurrent disease—and the possibility that Coley's method may, in time, be so far improved as to give us some better hold over these terrible cases than we have at present.

*Mr. MacAdam Eccles* pointed out the frequency with which recurrence occurred above the line of incision after amputation of the breast for cancer. With regard to the utility of amputation at the hip-joint for sarcoma of the thigh, he referred to two cases which were free from recurrence two and a half years after operation.

*Mr. Bidwell* deprecated the practice of leaving the nipple when amputating the breast for cancer; he also advocated the complete removal of the pectoral muscle in all cases where the growth invaded the muscle.

*Mr. Paget* replied.

**Dr. J. A. Coutts** read a paper on

#### THE TREATMENT OF EMPYEMA IN CHILDREN.

The practice of treating empyema by resection of a rib and subsequent drainage is now such a matter of routine that at first sight this subject would seem to afford but slight hope for profitable discussion. To one, however, with some experience of empyema prior to the resection days, it may be deemed permissible to attempt an analysis of what we have gained or lost by strict adherence to this modern method. Let me be clearly understood; I have not the hardihood to attempt any disparagement of the practice of rib resection, which, in my experience, has as yet proved the best possible one in the vast majority of cases. My only endeavour is to try and discover if in the minority of cases other measures may not still be worthy of trial, or may not have been too hastily discarded.

My paper, as may be gathered from its title, deals only with empyema in children. As, however, the complaint differs widely in its severity and results, according to the age of the patient, I have thought it well to limit my remarks in the earlier portions of the paper to the cases of children over the age of two years, and to leave to the finish a few brief observations on the treatment in those under that age.

For all ages, the treatment of empyema may be summed up under the five heads :—

- (1) Leaving it alone.
- (2) Opening the chest and draining without resection of a rib.
- (3) Opening the chest and draining after resection of a rib.
- (4) Repeated aspiration.
- (5) Attempting to wash out the cavity with some antiseptic without a permanent opening into the chest.

The first method, that of leaving an empyema to nature, has of late years been practically abandoned with good reason. It is, doubtless, true that cases have recovered, and the pus has been absorbed without treatment of any kind. Still more frequently has recovery taken place if a part of the pus has been removed by the exploratory syringe. This last procedure, indeed, is akin to the result of recovery after aspiration, when it is hardly probable that all the pus could have been withdrawn by the instrument. The do-nothing treatment, however, is too fatal to merit consideration, except on the part of the experimental pathologist who may wish to gratify his curiosity as to the exact place an empyema will point if left to itself. At Shadwell, unfortunately, especially in days gone by, we have had only too much experience of this. Personally, I have seen children admitted with empyemas pointing in the neck, the buttock, the abdominal wall close to the umbilicus, and one following the course of a psoas abscess and opening in the upper thigh. Hilton Fagge, too, mentions a case, or cases, where an empyema opened in the popliteal space.

For a spontaneous opening there is no doubt that one through the lung into a bronchus is more favourable for the patient than an external one. This was known to Hippocrates, who propounded the aphorism that "if an empyema discharges into a bronchus in less than thirty days the patient is saved." Although I agree as to the superiority of an internal opening over a spontaneous external one, I cannot say my experience of the favourable termination attending it at all tallies with that of Hippocrates. In despite then of authority derived from the ancients, I always prefer in suitable cases an artificial opening made by the surgeon in the usual way, in addition to any spontaneous one, internal or external.



In fact, as Donkin writes of the spontaneous cure of cases of empyema: "Natura Medicatrix scores but few successes here, and her efforts should always be prevented by surgical art."

The next two methods of treating empyema, by incision into the chest, without and with resection of a rib, I propose to consider together. Through the kindness of my colleagues, Drs. Eustace Smith and Donkin, I have been enabled to collect twenty-seven cases of empyema treated with simple incision without resection of a rib. I have also collected sixty-one cases treated by incision with rib resection from my own cases and those of my colleagues. These two groups in children above the age of two, I have tabulated for each separate year, as to number and mortality. As detailed statistics, however, are wearisome and often misleading, I will content myself with giving you a brief analysis of the totals.

In the first group of twenty-seven cases without rib resection, there were ten deaths, *i.e.*, a mortality of about 37 per cent., and the average stay in hospital was about three and a half months.

In the second group of sixty-one cases with rib resection there were seven deaths, *i.e.*, a mortality of 11 per cent., and the average stay in hospital was five and a half weeks. At first sight, both in lessened mortality and stay in hospital, the superiority of the fashionable operation over the other is most marked. A few considerations may, however, tend to remove much of the disparity between the two. By an unfortunate mischance I took the cases without rib resection from my colleagues' books for the year 1878. Now, in that year I fancy surgeons treated the pleura with much more respect, and were much more chary of entering it than they were a few years later. In many of the twenty-seven cases the child had been in hospital some weeks, perhaps months, before the operation was done. In most, the child had been weakened by futile attempts at cure by repeated aspirations, and in a few would seem to have been *in extremis*, and the operation done as a last resource. Had I taken my statistics from the case books of a year immediately preceding the ones when Estlander's operation became the fashion, and incision without rib resection was done as readily as the last now is, I feel from personal impressions there would not be

the enormous disparity between the two my statistics seem to furnish. In comparing the results of the old and modern operations, too, something must be discounted from those of the latter for the improvement in modern diagnosis, so that empyema is sooner recognised and treated, and for improvement also in later methods of antisepsis. Still, allowing for all these, and notwithstanding that I learnt yesterday that eighty-seven consecutive cases had been treated in one London Children's Hospital without rib resection, with only one death, my present impressions are all in favour of the more modern operation in suitable cases, although I am not inclined to allow all that is generally claimed for it. Practically I hold that the chief advantage attaching to it is the facility it affords for rapid and effective drainage. Its one disadvantage lies in the increase of shock. Now this increase of shock I cannot but consider our surgical friends are too much inclined to minimise and to lay insufficient stress upon. But a slight increase of shock that might be disregarded in the older and more robust, may be of serious and fatal import in a child worn out with suffering and hectic, and in a little infant. Still more pronounced does this become when owing to the state of the child an anæsthetic is inadvisable. On several occasions I have advised a simple incision into the chest of a child almost *in extremis*, without an anæsthetic, and in some cases with successful results. Had I been bolder and advised rib resection, with or without an anæsthetic, I cannot but think they might have succumbed to the shock, slight as it may be.

The plan once followed out at Shadwell of emptying the chest as far as possible by aspiration the day before the operation of rib resection, has now been abandoned. Besides unnecessarily distressing the child, it sometimes led to difficulties and dangers of its own at the operation itself, and, as far as I could make out, offered no compensatory advantages.

Before advising any operation it is, of course, more satisfactory to stand on the sure footing of pus having been found by the exploratory syringe; but not infrequently, owing to obvious conditions, no such confirmation of diagnosis is afforded one. The possible contingency of advising the opening of a healthy, or merely thickened, pleura has then to

be faced. But I cannot think that the odium attaching to a mere faulty diagnosis is at all comparable to the one of allowing a child with signs of a curable complaint like empyema to die unrelieved. A striking case of this description occurred to me last year. A weakly, emaciated, and still wasting infant, rather more than two years old, was admitted into hospital under my care. In the left chest there was dulness limited in front by the sternum, externally by the anterior axillary line, and extending above the clavicle and below to the cardiac dulness. Over this dulness area the breath sounds were diminished or abolished. The house physician, at my instigation, made some delicate attempts at exploration from the upper axillary side without success. I then left directions, asking Mr. Betham Robinson, my surgical colleague, to make a more thorough exploration under an anæsthetic. Mr. Robinson, I found, had scruples regarding exploration in the dark in such a region, even with an anæsthetic. He said, however, that if I had the courage of my opinions as regards empyema, he would remove a piece of rib from the front of the chest. As the infant was rapidly going downhill, after some hesitation I gave my consent to this procedure. Mr. Robinson accordingly divided the pectoral muscles and removed a piece of rib not far from the sternum. He found a cavity in the pleura shut off by adhesions down the anterior axillary line. In the cavity was a coherent mass of fibrinous material, containing several caseous nodules, neatly folded over the thoracic viscera. This mass was removed in its entirety through the incision. At the operation no pus was found, but for several days after plenty came through and soaked the dressings. The child made a rapid and complete recovery. In this case it is evident that no assistance could have been afforded by the exploratory syringe, and the boldness of the proceeding was justified by the saving of a life.

The chest having been opened, the question arises as to whether the cavity should be washed out or not. Hippocrates, who would seem to have been an expert at empyema, in that he was the first to advise rib resection and drainage for its cure, also washed out his cases, and his favourite medium for that purpose was a mixture of wine and oil. A few years back, too, washing out an empyema was one of the



canons of faith with every surgeon. Now the pendulum has swung the other way, and we are told that after rib resection washing out with antiseptics is unnecessary and possibly deleterious, and by some surgeons that this is so even in cases with offensive pus discharge, provided the drainage is free. It is true that in the routine days of washing out with antiseptics, cases of carbolic and corrosive poisoning occasionally occurred, and some few of syncope from blocking of the tube during the operation; but there are antiseptics without the drawbacks attaching to carbolic and corrosive, and proper attention to detail ought to render syncope the remotest of contingencies. I have never thoroughly appreciated the modern surgical objections to the measure, and accordingly all cases with offensive discharge under my care are religiously washed out. All cases, too, with a large cavity, that is to say, with a large absorptive as well as secretory surface, if associated with high temperature, I have washed out at discretion, let the drainage be as free as may be. For this purpose I generally advise a watery solution of iodine, or one of quinine, so lauded by the late Dr. Wilson Fox. Along with this I often order large internal doses of quinine, in the belief that not only does it restrain the temperature, but that it possibly has some influence over pus formation. Children bear quinine well, and I have never yet met with symptoms in those able to describe them, that have led me to suspect cinchonism in them. The good results of washing out in some of my cases converted both the past and present resident medical officers to the more frequent use of the old custom, and I now learn that, on the medical side of the hospital at least, the practice is much more often carried out than it was two years ago.

The attempted cure of empyema by repeated aspiration, so common a dozen years back, has deservedly fallen into disrepute. It was harmful in the way of taking up valuable time, and in causing delay in affording adequate drainage. Still there is, in my opinion, a place for the aspirator in the treatment of empyema. Few of us, I take it, have found in the laity that unnatural anxiety and eagerness to have their own abdominal and thoracic cavities, or those of their relatives, opened by the surgeons that some of the latter have discovered. If the ultimate results as to the future are equal in

cases apparently cured by aspiration, and in those of rib resection, then the simpler method will be gladly upheld by both the lay public and the profession. This point, equality of results, is, I think, settled by a paper by E. B. Hastings in the *Lancet*. In this he gave statistics of cases that had been treated in the Shadwell Hospital a few years before. He could find no practical difference as regards lung expansion, chest or spine deformity, or position of the heart's apex beat, in the cases treated by aspiration or more drastic measures. If, then, the results of cure by aspiration and rib resection are the same, one would preferably advise the first procedure. The great difficulty lies in the proper selection of cases. I have personally known a fair number of cases cured by aspiration, some at the first sitting, and others at a second. The conclusion my experience would lead me to is that the cases likely to be cured by aspiration are those that might be described in the terms applied to juvenile assemblies as "small and early." If an empyema be seen within a fortnight of its commencement, and be of small dimensions, then I think there is a possible chance of cure by aspiration. Some few years back I saw a boy of five years old with double empyema who had just recovered from influenza and double pneumonia a fortnight before. A single aspiration cured the one empyema, and two, at intervals of two days, the other, and the boy went out perfectly well and remains so. If there is no marked improvement after two aspirations, then I think it dangerous to persist in the method. Unfortunately, the cases we get in hospital are most of them too advanced for aspiration to be of avail. The method of repeated aspiration in the vast majority of them is to be condemned, and only a very superficial knowledge of *post-mortem* empyemata is necessary to prove its futility as regards cure. The record of Shadwell cases in the days before incision of the chest became the fashion, and aspiration reigned almost supreme, is gruesome reading in the light of our present knowledge.

As bearing on the treatment of empyema, I would briefly refer to the exploratory syringe. If empyema is to be often cured by simple aspiration, then the exploratory syringe will have to be used oftener and earlier in private practice than I can gather it is at present. It is disappointing to come across cases where pneumonia has been correctly diagnosed and



treated and an empyema missed through the non-exploration of a patch of persistent dulness in the affected chest. I know the difficulties likely to arise with mothers—they would call the use of the little instrument an operation; but a little firmness, and persuasion that what is done is essential for the child, would remove most scruples. The precautions regarding its use, taught in my student days, by which a wound of an intercostal artery, the lungs, or the liver, &c., were to be avoided, I look upon now as chimerical and somewhat fanciful. Accidents of any moment in this direction are not within my knowledge. There is, however, one precaution, not given in the text-books, that I should like to mention. This is its avoidance in the possible presence of a patch of recent pneumonia. There the pulmonary vessels are dilated and turgid with blood and bound by inflammatory exudation, and likely to be wounded by the needle. An excellent house-physician used the instrument on a case of mine a day after I had diagnosed pneumonia, and he set up immediate and copious hæmoptysis which nearly proved fatal. A similar mischance, I afterwards learnt, had happened to a patient of Eustace Smith's some three years before. Still with ordinary care such accidents should not happen, and the earlier use of the exploratory syringe will, I am persuaded, lead to the more satisfactory treatment of empyema.

In the time at my disposal my remarks on the treatment of empyema in children under two years old must be of the briefest. I would at once say, however, that I have no sympathy with the suggestion made recently at one of the societies, that incision of the chest should not be practised in infants owing to the high mortality attaching to the operation. Such a proposal could only arise, I fancy, from a lack of clinical material to theorise upon, or from a non-appreciation of how fatal a disease empyema is in infants, however it may be treated. The slightest consideration on this point ought to be quite sufficient to absolve any operation from undue responsibility in causing death. How fallacious statistics may be on the point is evident from the records of the Shadwell Hospital in 1893 and 1894. In the first year there were admitted ten children under two years old with empyema, and out of these ten nine died, giving a mortality of 90 per cent. In the next year there were admitted sixteen cases under two years,



and with the same treatment eight died, or only a mortality of 50 per cent. Adding those two groups together with some others, I find forty-three cases with a mortality of 63 per cent.

I hoped to have shown at this meeting a simple apparatus devised by one of our late residents, for the purpose of washing out an empyema with the introduction of only a hollow needle into the chest. By its use we had a series of three or four consecutive successes in infants, and were led to hope much from the method. In a further series, however, it proved unsuccessful, like most other measures in the disease, and the apparatus was abandoned and mislaid. Notwithstanding our non-success with it in the later cases, it still seems to me worthy of further trial, more especially when permission to open the chest cannot be obtained.

A perusal of the sixteen successes out of the forty-three cases would seem to indicate that even in infants rib resection gives the best results. This possibly arises from the fact that only the less debilitated cases were subjected to it. I have no statistics as to the results of simple incision under similar conditions. From general impressions, however, I am in favour of it in infants rather than the severer operation.

In the space of a few years we have lived to see repeated aspiration, simple incision, and rib resection, in turn lauded as *the* operation for empyema in children. If I may be allowed to generalise from an experience of some hundreds of cases, I would predict that, whilst rib resection will hold its own as the best for the more robust, simple incision will to a large extent replace that operation in infants and the more debilitated.

*Dr. May* referred to the treatment of empyema after operation by immersing the patient in a warm bath.

*Mr. Bidwell* mentioned that he had known caries of rib to follow resection for empyema in children, and, therefore, he was inclined to recommend simple incision in any case where the pus was not foetid; he thought too that the patient's stay in the hospital was shorter after incision than after resection of rib. Washing out was only employed when the pus was offensive, and in children he had found a warm bath of bichloride of mercury, 1 in 10,000, very satisfactory. He had treated two cases by washing out combined with immediate

closure of the wound ; in one case the result was satisfactory after a second operation, and in the other resection of rib was subsequently required.

*Dr. Coutts* replied.

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Meeting held Friday, May 3rd, 1895, the President,  
Dr. R. J. Banning, in the chair.

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**Dr. William Hunter** read a paper on

#### ANTIPYRETICS, THEIR USE AND ABUSE.

At the outset it was pointed out, that the extent to which antipyretic agents were used, and their manner of employment, was greatly, however unconsciously, influenced by our views regarding the nature of the fever process. In its simpler aspects, as it presented itself in animals, it might be looked on as essentially a reparative process, by means of which important changes were brought about in blood and tissues, and disease influences thereby combated.

In man, owing to the higher organisation of the nervous system, it had greatly lost this character. The febrile process invariably tended to be much in excess of any possible requirement and became in itself a source of danger.

In all cases of course, it was our aim to get entirely rid of the fever ; but it was not every degree of fever which became dangerous and rendered necessary the use of special antipyretic measures. Roughly, this might be stated to be  $103^{\circ}$  F. when continued, or rising to  $104^{\circ}$  or  $105^{\circ}$  in more acute sthenic cases.

Such measures were often spoken of as falling into two classes—those which lessened heat production, and those which increased heat dissipation. The division was a theoretical one. Most antipyretic agents influenced fever in both ways, increasing the loss of heat and diminishing its production. Even the cold pack or bath, than which no more serviceable antipyretic measure existed, owed its ultimate efficacy probably as much to the tonic and bracing effect on the nervous system as to the actual loss of heat immediately occasioned.

It was not necessary to speak of the value, in this relation, of such drugs as quinine, digitalis, aconite, salicylate of soda, antimonial salts, opium, &c.; or of such measures as cold sponging, cold baths. There could be no doubt that without these to our hand we should be seriously handicapped in our treatment of fever.

It was with regard to the more recently introduced antipyretics derived from coal tar products—such as antipyrin, antifebrin (acetanilide), and phenacetin—that opinion was reasonably divided.

Much used, even to the extent of abuse, on their first introduction, there was evidence that as antipyretics, these agents had fallen into disfavour. This was specially true of antipyrin, the one first and most extensively employed. And yet, as seemed to the writer, the powerful analgesic properties admittedly possessed by these drugs, especially by antipyrin, and phenacetin, had a direct bearing on the question of their usefulness as antipyretic agents. For this property testified in the clearest way to the remarkably sedative influence exerted by them on the nervous system; and for the reason above stated, control of the nervous system was one of the most important *desiderata* in the treatment of fever.

If the proper object in using such antipyretics were kept in view, he thought that they had a distinct sphere of usefulness. None of them influenced the course of the disease in any way. All of them were depressing if used in too large doses, or if their use in smaller doses was prolonged. In both these respects they compared unfavourably with such an agent as quinine. Their sphere of usefulness was thus perhaps more limited, but it existed none the less. Their proper object was not to abolish fever by a *coup de grace* as was at first thought and attempted, but to bring fever within reasonable and moderate limits, more particularly in severe sthenic cases where the temperature rose to  $104^{\circ}$ , and bade fair to rise higher. The object should in such a case be to bring the temperature down one or two degrees, and to effect this few antipyretics were so useful as antifebrin (acetanilide), and in certain cases also, as he had found, phenacetin. In all cases the dose ought to be guarded, more particularly of antifebrin. The dose of this drug as given in books (3—10 grains) was placed much too high. It ought rather to be 1—3 grains or



1—4. With an average dose of 2 grains much good could be got, the temperature falling one or two degrees, the perspiration moderate, and the general effect not depressing. He had also in certain cases found phenacetin even in 5-grain doses useful in lowering the temperature a degree or two.

When thus carefully employed, the ill effects attending their use were, as proved by the recent inquiry conducted by the Therapeutic Committee of the British Medical Association, neither severe nor frequent, nor of such a nature as to be a bar to their usefulness.

But the class of fever in which they were indicated was limited, primarily, to that of a sthenic variety, and their best effect could be observed if cold sponging were employed as an adjunct.

*Dr. Symons Eccles:* Dr. Hunter's suggestions as to the probable action of coal tar products both as analgesics and antipyretics might be correct, but the direct action of antipyrin, &c., though commonly believed to be stimulant to the heat centres, could also be attributable to their reducing qualities, depriving the protoplasm of the nerve cells of its oxygen, and thus reducing activity and producing analgesia. In regard to the high temperature of man being of nervous origin and peculiar to him, he could not altogether agree with Dr. Hunter, but believed that animals suffered also from nervous manifestations, which, like the hyperpyrexia of hysteria, might well be due to Nature's endeavour, by promoting excessive oxidation, to get rid of leucomaines or other toxins. In neurasthenia the rise and fall of the tide of leucomaines in the blood determined, or at any rate was coincidental with, the periodicity and presence of depression, malaise, and all the vague but real discomforts felt by neurasthenics and hypochondriacs, and he thought the time would come when toxæmia would be regarded as a probable, if not constant, factor in functional nervous disorder.

*Dr. Atkinson* had not found any benefit to follow the use of antipyretics, and thought that, as the temperature always fell before death, high temperature by itself would not kill a patient.

*Mr. MacAdam Eccles* referred to surgical cases where temperature was due to nerve influence. Under this head he included some cases of head injury followed by high fever

without sepsis and cases of so-called catheter fever. With regard to the temperature rising after a head injury, he pointed out that it was often different on the two sides.

*Dr. Hunter* replied.

At the same meeting **Dr. Cagney** read a paper on the

#### RECOGNITION AND TREATMENT OF PERIPHERAL NEURITIS.

He quoted cases to show that in many instances of alcoholic neuritis there was a danger of administering alcohol for the relief of symptoms which were in reality due to that poison. He discussed some circumstances in the causation of neuritis, and cited cases showing a remarkable individual susceptibility, both inherited and acquired. He maintained that a combination of toxic states was most often the probable cause of neuritis, and dwelt upon the summation of causes in this manner, quoting illustrative cases. **Dr. Cagney** observed that in view of the great importance of recognising this condition, and of the very great certainty of the methods of diluting it in all cases where the motor system was involved, it was discreditable to medical men not to make themselves familiar with the very simple methods of electro diagnosis, just as they did with certain urinary tests. **Dr. Cagney** spoke shortly of his experience in the treatment of peripheral neuritis.

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A Meeting of the Society was held on Friday, June 7, 1895, the President, **Dr. R. J. Banning**, in the chair.

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#### CLINICAL EVENING.

**Dr. ALDERSON** showed the following case :—

##### FRACTURE OF NECK OF HUMERUS.

On the morning of January 21, 1886, the patient fell down stairs backwards, alighting on her right shoulder. She was a heavy, stout woman. Crepitus distinct ; loss of movement. Fracture of the head or neck of humerus diagnosed. Patient

was kept in bed for the first ten days, and four splints were applied; there was considerable swelling of the shoulder, and for a few days cooling lotion was applied. The splints were kept in position by strong webbing straps with buckles, with the advantage that, as the swelling subsided, the splints could be tightened without disturbing frequently. There was good union in seven weeks and the splints removed, but on account of rheumatism there was not much use in arm for some time, but when quite recovered she suffered more from rheumatic gout in hands and fingers than shoulder. Patient died June 21, 1894, and had had the use of her arm for over eight years. The humerus was shown.

#### FRACTURED NECK OF FEMUR.

Dr. ALDERSON: The patient, aged 69, gave a very incoherent account of the accident, but her sister told me that upon going up the staircase her foot tripped and she fell down two or three stairs. On examination I found the leg everted about three-quarters of an inch shortening; there was slight but distinct crepitus. I applied long splint with perennial band, and counter extension was well kept up, and small bags with shot were kept on the foot, and a sand bag was occasionally kept over the upper part of thigh, as near to the seat of fracture as possible.

The long splint was removed at the end of six weeks, and there was fine union on May 14, when a huge bed sore was discovered in the centre of the gluteus. The patient had never complained of any pain; zinc and carbolic lotions were constantly applied, and charcoal poultices, but the bed sore remained in a strengthening condition and Mr. Keetley was called in, who happily suggested a fractured bedstead, *i.e.*, a bedstead with a hole in it so that the buttocks should be perfectly free and all pressure removed, and the bed sore irrigated with Condry's fluid at least twice a day; indeed, at first a fountain spray was kept constantly playing on it, for often two or three hours at a time. Perfect recovery was much retarded by acute arthritis in both knees. The patient never used crutches, and walks *without lameness*, and is now in excellent health; has not suffered from rheumatism since.



Dr. ALDERSON also showed the following case:—

FRACTURE OF THE HUMERUS.

J. R., aged 13, a pupil of Godolphin School, was standing on a low roof not more than a foot and a half from the ground; he suddenly slipped off and fell flat on the palm of his hand; "he heard the bone snap." The humerus was fractured in its lower third; the upper fragment projected inwards and forwards. There was considerable deformity, but was easily reduced by extension; there was also noticed a little fine crepitus at the inner condyle, which was at the time thought might be the result of effusion. The arm after extension was placed in a right-angular splint, and the fragment carefully adjusted in upper splint and a short internal one.

May 19th.—The boy had had a good night and was comfortable up to 5 a.m., when the arm began rapidly to swell, and when seen at noon, the bandages had to be removed and the inner splint; a cold evaporating lotion was applied to elbow and the boy kept in bed. Dr. Herbert Alderson, who saw the patient for his father, who had gone to Bournemouth for a few days, thought there had been a T fracture into joint, but as the bones were in good position did not attempt to find out. After three weeks splints were taken off and the union of shaft good. Ribbed splints were now applied, and the joint still kept immovable for another week. At the end of the fifth week all splints were removed, but the joint was found to be ankylosed. Blisters, iodine, and counter-irritation applied, and friction and extension with slight appreciable benefit, and Mr. Keetley was now, at the end of six weeks, consulted, and "diagnosed that there had been a T fracture into joint and a part of the internal condyle had been chipped off." Mr. Keetley advised that the boy should be put under gas twice a week and the joint forcibly extended. This was done on July 5th and 9th with considerable benefit, and daily manipulation and friction. On the 21st he left school for his holidays very considerably improved, and his arm for all practical purposes useful.

September 21st.—Returned to school; said "his arm is quite well;" free extension, but flexion slightly limited. The injured arm at present date, June 9th, "*is stronger than the other*;" but the internal condyle is slightly larger than the other, but

the measurement round the elbow at the condyle is the same—eight inches. He thought the fracture might have been inclined close to muscular action; the fall was only a short distance, and the boy tried to save himself and fell on *the palm of his hand*; the acute synovitis that supervened the result of the severe sprain and tension. But if it was a T fracture the good result is still more satisfactory, as this accident is mostly followed by permanent deformity and much diminished usefulness.

*Mr. Lunn* referred to several cases of extra-capsular fracture of the neck of the femur in old people due to indirect violence, and showed two specimens. He advocated the treatment of such cases by plaster of Paris splints, which allowed of the patient getting upon crutches at the end of a week or two.

*Mr. Bidwell* also urged the treatment of fractures of the femur by the immediate application of plaster of Paris splints. He also recommended that T-shaped fracture of the lower end of the humerus should be treated by a well-fitting plaster splint, which ought to be kept on for a month. If the fracture had been kept completely immobilised, the movement of the elbow quickly returned without much trouble.

*Mr. Yearsley* also mentioned some cases of T-shaped fracture of the lower end of the humerus, which had been treated by plaster of Paris splints, in all of which the subsequent movements of the elbow were excellent.

#### TWO CASES OF SUSPECTED INTRA-CRANIAL TUMOUR.

*Mr. Juler* read the notes of the two cases of suspected intra-cranial tumours. He apologised for the absence of one of the cases, the other fortunately had come, and he was able to demonstrate her to the members of the Society. They were both women, aged respectively 18 and 32. They had come under *Mr. Juler's* notice on account of failure of vision, due to severe double optic neuritis. In one case the swelling of the papilla had subsided into a post-neuritic atrophy, with improvement in vision, but in the other, the woman present, a very marked "choked disc" still existed, with complete blindness. Vomiting and severe headache had existed at different times in each case. These two symptoms, however, are almost invariable accompaniments of any severe optic neuritis from whatever cause, and do not necessarily limit the

lesion to within the cranium. The severity of the nerve-head swelling, though in favour of intra-cranial mischief, would not suffice to exclude other causes, such as Bright's disease, diabetes, influenza, and the like. There was no reason to suppose the neuritis to be due to any disorder of the menstrual function. Mr. Juler was of opinion that few as the symptoms were which pointed to intra-cranial mischief they were sufficient to guide to a diagnosis, for in one case fits, failure of memory, and weakness of the lower extremities existed, while in the other periodical attacks of unconsciousness occurred. Besides, by the absence of collateral evidence of other causes of papillitis the intra-ocular changes in his cases could, by a process of exclusion, only direct one to the head source of optic neuritis. He considered, therefore, that both cases belonged to that class which Hughlings Jackson has called "optic neuritis with non-localising symptoms" when referring to the neuritis of intra-cranial origin.

*Mr. Lunn* mentioned a case of double optic neuritis in which a cerebellar tumour was found and successfully removed. He also referred to a case of cerebral tumour which proved fatal after operation.

#### TRIGEMINAL NEURALGIA.

Mr. COLLIER showed a man, aged 32, who had been the victim of severe and intense trigeminal neuralgia for over four years.

The case had been treated in several institutions, but without relief. On examining the nose a marked deflection of the septum was apparent on the affected side, which, with a large turbinal varix, completely occluded that side.

With a probe some pendant structure could be felt hanging from the middle turbinated bones. These turned out on removal to be ordinary mucous polypi. Further, a large extent of necrosed bone could be felt. This was at once removed, and the patient made a rapid and complete recovery.

In this case the nose had not been previously examined.

Mr. Collier pointed out that the whole of the interior of the nasal cavities was supplied by sensory branches springing from the nasal ganglion on the second division of the fifth



nerve, and one would certainly expect to find irritation in the nose as frequent or more frequent a cause of neuralgia of the fifth nerve than irritation of the comparatively limited distribution of the other sensory branches of the second division.

In the face of this glaring anatomical fact, the nose was seldom or never examined in these cases.

In Mr. Collier's experience, trigeminal neuralgia was constantly due to nasal disease.

*Mr. Lake* drew attention to the more common situation of neuralgia in nasal cases, and said that he was interested in the question of necrosis without even a suspicion of specific history.

#### HALLUX RIGIDUS.

Mr. MAYO COLLIER showed a case of hallux rigidus recently operated on. The patient, a youth aged 17, presented himself at the hospital six months ago, complaining of pain after walking in the ball of the right great toe. The foot showed all the signs associated with hallux rigidus, namely, adduction, flexion of metacarpal bone on carpus and slight flexion of proximal phalanx on metacarpus, rigidity of metacarpophalangeal joints, and severe pain on any attempt to extend same.

There was some degree of flat foot and want of tone in the limb.

Rest, tonics, frictions, &c., failing, the case was admitted into hospital and the head of the metacarpal bone removed.

The usual pressure caries was present on the under aspect between the sesamoid bones and the head of the metacarpal bone.

The specimen was exhibited.

The patient was now quite recovered; locomotion was completely restored, without any apparent change in the functions or appearance of the foot.

*Mr. Bidwell* considered that most of the cases of hallux rigidus could be relieved by forced extension under chloroform, after which the toe should be kept in a state of over-extension by means of a plaster of Paris splint for fourteen days.

*Mr. Yearsley* remarked on the combination of this condition with flat foot.

#### COMPOUND FRACTURE OF LEG.

*Mr. KEETLEY* showed two cases of compound comminuted fracture of the tibia and fibula which had been treated by pegging and wiring the fragments. He insisted on the necessity of keeping all the fragments, even if several pieces of wire had to be inserted.

#### RODENT ULCER.

*Mr. BIDWELL* showed a man, aged 74, suffering from a rodent ulcer on the outer side of the left thigh. It had existed four years and was the size of a teacup. A portion had been removed for microscopic examination, and was found to be typical of rodent ulcer. *Mr. Bidwell* recommended free incision combined with immediate *Thiersch's* grafting.

#### WARTY GROWTH ON JAW.

*Mr. BIDWELL* also showed a boy, aged 17, who suffered from a warty growth below the jaw. This had arisen round the sinus formed from a carious tooth, which had existed five years. He considered that the warty growth was due to the continual irritation of the purulent discharge.

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### PATHOLOGICAL SPECIMENS.

#### EXTRA-UTERINE GESTATION.

*Mr. L. A. BIDWELL*: The foetus and placenta from a case of extra-uterine gestation.

The case had gone to term, and a false labour occurred at the end of November, 1894. Laparotomy was done in the beginning of January, 1895.

At the operation the small intestine was intimately adherent to the sac, and portions of it were torn in attempts to separate it. Five of eleven inches were resected, and joined by *Maunsell's* method.

The patient is now convalescent.

## EXTRA-UTERINE GESTATION.

Dr. ABRAHAM for Dr. MOULLIN: Specimen removed from a case of extra-uterine gestation in the third month of pregnancy.

Patient recovered without a bad symptom.

## GASTRO ENTEROSTOMY.

Mr. L. A. BIDWELL: Specimen of the parts after a gastro-enterostomy.

The operation was done for cancer of the pylorus, and the patient lived ten days.

The opening is on the posterior surface of the stomach, and the jejunum attached was one and a half inches from the duodenum.

## SALIVARY CALCULUS.

Dr. F. PARKES WEBER: A more curious case is the following, which came under observation after the above mentioned one. A woman, aged 30, had a lump, the size of a small chestnut, on the left side of her neck, in appearance similar to that of a chronically enlarged lymph-gland below the angle of the lower jaw. She remembered having had this lump since childhood. It used temporarily to increase in size whenever she took a meal or when she "caught a cold." For a considerable time on these occasions the lump had been painful as well as swollen. Recently a sore place had formed under the tongue, and a small body "resembling a piece of bone," but doubtless a salivary calculus, escaped from it. The calculus was unfortunately thrown into the fire, but the patient was seen half-an-hour afterwards. There was a swelling under the angle of the jaw, and under the tongue, about a quarter of an inch to the left of the *frænum linguae*, was a fistulous opening, from which a thin, watery, flaky fluid exuded when pressure was made in the position of the submaxillary salivary gland, but not when the pressure was made directly over the lump below the angle of the jaw. *Fætor oris* was considerable. When the patient was seen fourteen days later, after the use of a mouth wash and a tonic medicine, the swelling under the angle of the jaw was no longer to be made out, the inside of the mouth appeared normal, and no swelling in the former position had appeared during meal times.



## HÆMATOCELE OF SCROTUM.

Mr. McADAM ECCLES: A healthy man, aged 68, who served at Lucknow in the Indian Mutiny, had suffered from double inguinal hernia for ten years.

Seven years ago, while lifting a heavy stone, he felt as if "something gave way at the bottom of the purse." In twenty-four hours a large painful swelling had formed on the right side of the scrotum.

This state of things lasted for the seven years, the patient never seeking advice about it.

He was seen by me on April 10th, 1895, a hæmatocele was diagnosed, and its removal advised.

*Operation, April 20th.*—No testicle was felt; an incision into the fluid swelling, which measured eighteen inches transversely by twelve inches vertically, revealed great thickening of the tunica vaginalis, and much blood clot, old and recent, on its walls, with the characteristic cholesterin containing fluid.

The sac and the atrophied testicle were dissected out, and the redundant skin removed, and the parts sutured. Perfect union followed, and the patient left the hospital in a week.

## NASO-PHARYNGEAL POLYPUS.

Mr. RICHARD LAKE: Patient, aged 21, had been unable to breathe through left nostril for two years, and experienced considerable obstruction in the right. The growth was removed by the Jarvis snare.



# THE CAVENDISH LECTURE.

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## ON DREAMY MENTAL STATES.

By SIR JAMES CRICHTON BROWNE, M.D., LL.D., F.R.S.,

*Lord Chancellor's Visitor.*

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*Delivered before the Society on June 20, 1895.*

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MR. PRESIDENT AND GENTLEMEN,—I have first to thank you for the honouring invitation conveyed by your Council to deliver this Cavendish Lecture—an annual discourse established, I understand, to perpetuate the memory of the noble and benevolent peer by whom the West London Hospital was founded, but the title of which also recalls another scion of the same house—that great, silent, sagacious Henry Cavendish—who, a hundred years ago, helped to found that natural philosophy to which modern medicine owes so much, and one of whose experiments actually foreshadowed our most recent scientific triumph—I mean the discovery of argon. But while thanking you for your invitation I cannot but feel that there was, perhaps, some rashness in my acceptance of it, for, confined as I now am to the narrow precincts of officialism, and without command of clinical material, I am scarcely entitled to follow in the footsteps of those who have hitherto addressed you from this chair, who have always had practical aims in view, and have communicated to you the fruits of their own experience in such a manner as to be immediately serviceable in your professional work. But medicine is many-sided, and touches, or is touched by, almost all human affairs, and it occurred to me that I might not unprofitably conduct you this evening into a by-path of pathology, and ask you to leave the bedside for a little and consider with me certain mental conditions that are encoun-

tered in daily life that have a literary and philosophical interest, and that are not, I believe, without great medical significance. I have therefore culled from the faded leaves of an old notebook some observations on curious, fleeting, but elaborate psychical modifications, which have been designated "dreamy mental states," also "voluminous mental states," likewise "intellectual auræ," and which have not yet received in this country the amount of attention they deserve. Now, the simplest form of these dreamy mental states—a sense of reminiscence it has been called by some, a sense of prescience by others, and the application to it of such apparently contradictory names suggests that it is somewhat mysterious in nature and difficult of interpretation—is to be found described vaguely, but recognisably, in the works of many of our most gifted writers. It consists in an impression suddenly taking possession of the mind that the passing moment of life has been once lived before or must be once lived again—that surrounding objects have been seen once before exactly in the relations in which they at the instant present themselves. "How often," says Sir Walter Scott in "Guy Mannering"—"how often do we find ourselves in society which we have never before met, and yet feel impressed with a mysterious, ill-defined consciousness that neither the scene nor the subject is entirely new; nay, we feel as if we could anticipate that part of the conversation that has not yet taken place." "We have all some experience," says Charles Dickens in "David Copperfield," "of a feeling which comes over us occasionally of what we are saying or doing having been done in a remote time, of our having been surrounded dim ages ago by the same faces, objects, and circumstances—of our knowing perfectly well what will be said next, as if we suddenly remembered it." Rossetti says in "Sudden Light":

"I have been here before,  
But when or how I cannot tell:  
I know the grass beyond the door,  
The keen, sweet smell,  
The sighing sound, the lights around the shore.

"You have been mine before—  
How long ago I may not know:  
But just when at that swallow's soar  
Your neck turned so,  
Some veil did fall—I know it all of yore."



Edward Dowden says :

“There is a murmur in my heart I hear,  
Faint, oh ! so faint, some air I used to sing,  
It stirs my sense, and odours dim and dear  
The meadow breezes bring.

“Just this way did the quiet twilight fade  
Over the fields and happy homes of men,  
While one bird sang as now, piercing the shade,  
Long since, I know not when.”

Without multiplying illustrations of this simple, dreamy mental state as experienced by masters of the literary craft, I would point out that almost invariably when these masters have attempted to explain it, or have speculated as to its origin, they have regarded it as a vestige of a previous state of existence, as an echo from a life anterior to the present one. The thought that is of the essence of the state is transient and vanishes before it can be grasped ; it is often connected with circumstances of the most commonplace or trivial description—Oliver Wendell Holmes says it used to occur to a poor student when he was blacking his boots—and yet it startles as if it were a flash of revelation, and leaves behind it a sense of solemnity and doubt. Those who are visited by it know well that it is no ordinary reminiscence, no error of memory, no mere poetical fancy, but an absolute identification of the present with the past ; and it is little wonder that they should translate the perplexity which accompanies it into ghostly glamour and trace it back to prehistoric times.

“Our birth is but a sleep and a forgetting :  
The soul that rises with us, our life's star,  
Hath had elsewhere its setting,  
And cometh from afar ;  
Not in entire forgetfulness,  
And not in utter nakedness,  
But trailing clouds of glory do we come  
From God Who is our home.”

Thus Wordsworth wrote, and it is to the cloudy remnants, which may, according to him, be detected in infancy, that dreamy states in adults have been most commonly referred. Coleridge, who was very subject to dreamy states of all sorts and sizes, seems to have been disposed to take this view of their hidden meaning, for he said :

“Oft o’er my brain does that strange fancy roll,  
Which makes the present, while the flash doth last,  
Seem a mere semblance of some unknown past  
Mixed with such feelings as perplex the soul  
Self-questioned in its sleep ; and some have said  
We lived ere yet this robe of flesh we wore.”

And Russell Lowell was evidently of the same way of thinking, for he said :

“And now sometimes we seem to find,  
In a dark crevice of the mind,  
Some relic which, long pondered o’er,  
Hints faintly at a life before.”

Coventry Patmore, too, dealing with the same topic, arrives at the same conclusion, set forth in these words :

“At times some link of harmony seems missing, and we anon  
Remember states long ended ere we left the womb,  
And see an awful something flashing to us from the tomb,  
The zodiac light of new states dashed tremendously with gloom,  
We tremble for an instant, and a single instant more  
Brings absolute oblivion, and we push on as before.”

It is not at all improbable that the doctrine of human pre-existence owed its origin to unaccountable reminiscences of the kind alluded to in the passages quoted. To imaginative minds in superstitious ages they may have seemed to afford glimpses of real insight into an otherwise impenetrable past, and even to matter-of-fact minds at the present day it must be admitted they sometimes bring with them convictions of metempsychosis which it is difficult to shake off. But with the transcendental aspects of these reminiscences or dreamy mental states we are not here concerned. It is ours to deal with them from a purely medical point of view, and so we must regard them, not as intimations of immortality, but as revivals of hereditarily transmitted or acquired states in new and special combinations.

Dreamy states, as I have already remarked, have been experienced and recorded by many of our most eminent writers, and as regards their general prevalence it has been assumed that they are a universal human experience. Dickens says we have all had them, and the usual introduction to any description of them is that they are a feeling with which everybody is familiar. “Everybody is familiar,” says Thomas Hardy, in “A Pair of Blue Eyes,” “with those

strange sensations we sometimes have that our life for the moment exists in duplicate, that we have lived through that moment before or shall again." No doubt these dreamy states are very common amongst us at the present day, but it will, I am sure, be found on inquiry that they are by no means all-embracing, and that while they abound amongst the educated, the refined, and the neurotic classes, they are comparatively rare amongst the unlettered, the prosaic, and the stolid masses of our people. The difficulty of getting information about them is considerable, for those who have experienced them generally manifest a disinclination to talk about them, from a not unwarrantable suspicion that they are somehow morbid in their nature; and those who have not experienced them cannot comprehend what is meant by them, and often treat questions bearing on them with a levity like that of the young American who, when interrogated respecting them, replied that he never lighted a cigar without the deepest conviction that he had done the very same thing not once, but many times before. Still, a little careful investigation as to their distribution will, I am satisfied, conduct to the conclusion that dreamy mental states, although widespread, are by no means universal, and cannot with propriety be called normal phenomena. The fact is that they emerge only at a certain state of mental evolution, rarely occurring in a child under eight years of age, or in a man or woman of less than average mental development, and are not themselves a part of the evolutionary process, but one of the accidents by which it is attended. They do not present themselves before that stage of intellectual growth at which the capability of entertaining abstract ideas is attained, and they find no place in a scheme of natural and organic mental expansion, but are an interference with the chiaroscuro of perfect mental health, and the first step in a series of changes which, extending through many degrees of mental dissolution, ends in complete coma or obliteration of mind. I shall hope to show that these dreamy states, so far from being normal, even in their slightest and simplest form, and occurring in presumably healthy persons, involve disorder of mind, trifling and transitory no doubt, like cramp in a few fibres of a muscle, but disorder nevertheless dependent on a defect of consciousness in one direction, indicated by vagueness as to present



surroundings, and an increase of consciousness in another direction, indicated by the too vivid revival of former surroundings. There is in them a negative element in the loss of control of the highest centres and a positive element in the raised activity of other nervous arrangements, permitting of new cerebral combinations somewhat akin to those which take place during the activity of the imagination and flights of genius. If the sense of beauty is vision raised to a higher power, a dreamy mental state is memory diving to a lower than its accustomed level and bringing to the surface deeply submerged personal annals, or even still more unfathomable ancestral traits. A dreamy state it may be conveniently called, and dreamy in some aspects it undoubtedly is, and yet, strictly speaking, it is not comparable to a dream, for it involves a residuum of object consciousness larger than a dream contains and a volume of subject consciousness to which a dream rarely reaches. It has peculiar features of its own, and stands in the same relation to a dream that the darkness of an eclipse does to the more frequently recurring darkness of night.

I have hitherto spoken of dreamy mental states of the most ordinary and uncomplicated type—those that are least removed from normality and consist in reminiscence; but it must be pointed out that such states are of many different kinds, and that those who commence in reminiscence sometimes branch out into more elaborate manifestations. They have not yet been classified, and this is to be regretted, for the accurate observation and arrangement of them would in all likelihood throw much light on their nature and almost certainly reveal that, notwithstanding their diversities, they often closely resemble each other as occurring in different individuals, and fall into several groups corresponding probably with disorder of several different cerebral areas. As yet, however, all we can do is to enumerate some of their characteristics and varieties. The most general description of them is that they are indescribable and transcend all common experience, and the crudest analysis discloses this much—that they consist in an exaltation or subject consciousness and a degradation of the power of attention for the time being, and are almost invariably concerned, however vaguely, with those ultimate scientific ideas—space, time,

matter, motion, force, and the like—which are beyond the domain of certain knowledge and, according to Herbert Spencer, unthinkable. Contrary to all experience, they have yet apparently the highest experiential validity. They declare themselves now as tamperings with those intuitions that yield the consciousness of continued existence, and again as excursions into that infinite field that lies behind appearances and of which it is dangerous to affirm or deny anything. Plunges they are into these depths of outer mystery in which the certitudes of science lose themselves, and out of which it has been said the certitudes of faith arise. Momentary realisations they become of Nirvana or the cessation of being, or foretastes of purgatorial pains more searching than any that Danté conceived. “Dream not, Coleridge,” Charles Lamb wrote, “of having tasted the grandeur and wildness of fancy till you have gone mad.” “Think not, Lamb,” Coleridge might have replied, “of having touched the skirts of immensity and mystery until you have had a dreamy mental state.” The victims of dreamy mental states, striving to convey some notion of them, tell us that they consist in a feeling of being somewhere else—in double consciousness—in a loss of personal identity—in a going back to childhood—in the vivid return of an old dream—in losing touch of the world—in a deprivation of corporeal substance—in a loss of a sense of proportion—in momentary black despair—in being at the Day of Judgment; and they supplement whatever phrases they use with the assurance that it is impossible to put into words such strange and incomprehensible visitations.

That dreamy mental states, even of the most familiar type—those, I mean, which consist in reading into the present some version of the past—are abnormal in their essence and morbid in their tendencies may, I think, be demonstrated by a study of their transitions, their associations, their congeneric conditions, and their consequences. As represented to us in literature, these simple dreamy states are occasionally linked with other mental states akin to them, but of a more pronounced pathological character. In Tennyson’s writings, for example, we have several references, that are not all obscure, to what may be termed the ordinary dreamy mental state. In “The Two Voices” he sings :

“ Moreover, something is, or seems,  
That touches me with mystic gleams,  
Like glimpses of forgotten dreams—

“ Of something felt, like something here ;  
Of something done, I know not where ;  
Such as no language may declare.”

And in the “ Early Sonnets ” he thus delivers himself :

“ As when with downcast eyes we muse and brood,  
And ebb into a former life, or seem  
To lapse far back in some confused dream  
To states of mystical similitude ;  
If one but speaks or hems or stirs his chair,  
Ever the wonder waxeth more and more,  
So that we say, ‘ All this hath been before ;  
All this has been, I know not when or where.’ ”

But in Tennyson’s writings we have also references to other mental states which have about them quite as convincing a ring of personal knowledge, and the morbidity of which cannot be questioned. Thus in “ The Princess,” we are told that the hero, who belonged to a race haunted by a hereditary nervous affection, was himself afflicted by—

“ Weird seizures, Heaven knows what :  
On a sudden in the midst of men and day,  
And while I walked and talked as heretofore,  
I seemed to move among a world of ghosts,  
And feel myself the shadow of a dream.”

In these words it is not difficult to recognise an outline of *petit mal*, and Tennyson himself names these seizures epilepsy, and we have, therefore, in his poetical biography appreciations of a simple dreamy mental state and of the epileptic state, of which these dreamy mental states are so often the prelude or accompaniment. In Tennyson’s poems these two states are not brought into immediate relation, but in our professional experience it is no uncommon thing to find the one state signalling the onset of the other or alternating with it ; and it is no uncommon thing for us to observe that, with or without some subjective sensational warning of an approaching epileptic fit, there arises a dreamy mental state, which in that connection has been designated an intellectual aura. It is not suggested that the dreamy mental state under such circumstances is directly due to the epileptic discharge, but there are grounds for holding that it



depends on the heightened activity and increased energising of nervous arrangements intimately linked with those in which the true epileptic discharge begins. A truly epileptic or sudden and excessive discharge of the highest nervous arrangements results, not in ideas however vague, but in the negation of thought or loss of consciousness, and ideas properly so called attend the excitation and not the explosive discharge of these arrangements. Intellectual auræ or dreamy mental states are, therefore, precursors and not integral parts of epileptic fits. A medical man who, five-and-twenty years ago, contributed to the *Practitioner* an interesting memoir of his own case, said that he had suffered from boyhood from dreamy mental states of reminiscence, or a startling conviction that he had once before been placed in the exact circumstances in which he found himself, and that immediately before his first epileptic fit, which occurred in middle life, these dreamy states recurred with unusual frequency and intensity. "Since my first attack," he went on, "I have only had few recurrences of the feeling, but on two occasions these were followed the next day by an epileptic seizure." One patient of Dr. Hughlings Jackson reported that his fits began by "a sort of referring to old things that have happened," after which he lost himself; another intimated scenes reverted for hours before a fit; another said, "If I were walking along and had a fit I should think, 'Oh! I saw that before'"; and a patient of my own, before each fit—and his fits were marked by violent convulsions and tongue-biting—had a similar impression accompanied by intense terror and alarm. Dr. Joseph Coats, of Glasgow, has narrated the case of an intelligent man who stated that with few exceptions his fits had been preceded by giddiness and "a peculiar thought," as he expressed it. He attached great importance to this "thought," saying that if it were known his whole case would be explained, and, although he could not tell what the thought was, he was confident that it was always the same. He always recognised it when it occurred, and tried to fix it in his memory, but he invariably forgot it when the fit was over. Now this case recorded by Dr. Coats, and another case in which "a dreadful queer feeling" gave notice of fits when they first commenced, but was gradually lost as they became confirmed and severe, suggest that

dreamy mental states perhaps prelude epileptic fits more frequently than the testimony of those who suffer from such fits would lead us to suppose, for it is undoubtedly true that when consciousness is suddenly interrupted there is often obliteration of the records of conscious experience for a period, longer or shorter, before the exact moment at which the interruption occurred. The impressions received, the ideas developed on the sensitive plate of the brain can only apparently be fixed there so as to be capable of reproduction while conscious activity is maintained, and an abrupt cessation of brain function not only arrests sensation and perception, but prevents the due registration of some sensations and perceptions that have taken place immediately prior to the break in the chain of conscious life. The blackness of insensibility casts a dark shadow behind it. In cases of concussion or injury of the brain inducing coma we frequently find that there is, after recovery, a mental blank as to incidents that occurred some time before the accident, and in cases of epileptic seizure it may sometimes be demonstrated that events occurring a few minutes before the actual invasion of the fit or of any premonitory symptom of it, at a time when the intellect was clear and conduct rational, cannot by any effort be recalled after the fit is over. It may well be, therefore, that mental experiences in juxtaposition to the fit—and constituting, indeed, its initial symptom or warning—are irrecoverable in memory, and so the assurances of persons subject to dreamy states and epileptic fits, that the former do not usher in the latter, cannot be received as trustworthy. The late Professor Laycock, of Edinburgh, recorded a case of epilepsy in which the paroxysms were inaugurated by a peculiar cry, a cry which, however, came sometimes independently as a false alarm, not being followed by unconsciousness or convulsions, and whenever that cry came alone the man was aware of it and discussed it afterwards, wondering what it meant; but when it was followed by a fit, he had no after knowledge of it, and denied its having been emitted; no permanent record of it had been made. And just as with that cry, dreamy states, dread thoughts, or emotions of terror which, when standing alone, can be remembered, may be, when linked with a fit, irretrievably blotted out. The frequency with which a cry begins an epileptic fit might



perhaps be regarded as some indication of the frequency of dreamy states at that juncture, for the cry is mostly strongly suggestive of acute mental trouble, and is probably, in some cases at any rate, determined by a feeling of fear present at the moment, but not subsequently recollected, and it is not to be lost sight of, in this connection, that a sudden fright is believed to be one of the most common exciting causes of epilepsy.

But whatever may be the frequency of dreamy mental states as psychical auræ in epilepsy, I feel satisfied that the risks attending them in connection with epilepsy may be measured by the degree in which an emotional element enters into them or in which they intend to pass over into action. Those states that are colourless or agreeable are comparatively innocent, whereas those that are attended by fear, pangs, anguish, horror, or visceral disturbances are peculiarly apt to lead up to convulsions. Many cases have been noted—I shall shortly refer to some of them—in which dreamy mental states, mingled with fear, have ultimately merged in epilepsy; and this danger seems to me to be peculiarly great when the fear is connected with visceral sensations, such as difficulty of breathing, oppression of the chest, palpitation of the heart, or a feeling of sinking at the epigastrium. A girl who was under my care in the West Riding Asylum, and who had suffered for years from what she called a “frightened belly-ache,” and could only further explain as a feeling of fear at the pit of her stomach, after a time became epileptic, her fits being always immediately preceded by the “frightened belly-ache,” which lasted for about five seconds, and allowed her time to give notice of the impending seizure, which she invariably did by piteously shouting out, “Bump my back.” If before the actual appearance of convulsive spasms anyone could reach her and obey her mandate, by giving her four or five smart blows over the lower dorsal vertebræ, the fit was very frequently averted. Another girl under treatment at the same time, who before becoming epileptic had been subject to slight fainting feelings accompanied by the dread of being killed, gave notice of her attacks by crying out, the instant before she dropped, the words, “Dangers and bolsters!” which were understood to convey an announcement of the revival of her old apprehension and the expres-



sion of a wish that a pillow might be brought on which to rest her head. Still another girl, who was epileptic, alleged that for several years before her fits came on she had had occasionally an indescribable feeling of "awful disgust"—a feeling that had once or twice ended in vomiting, and that had often recurred when a fit was impending.

In many cases of epilepsy that have been associated with dreamy mental states the infusion in these states of a feeling of fear and of obscure visceral sensations, may, I believe, be made out, visceral sensations in this connection being more frequent than crude sensations of coloured vision, or noises in the ears, or more elaborate sensations of spectral faces or hearing voices.

But not less ominous than visceral sensations in connection with dreamy states are actions which are repeated whenever these states recur, for these indicate a deepening or diffusion of the cerebral disturbance which makes it correspond with somnambulism rather than with dreaming. Running movements may only betoken the dominant emotion of fear; masticatory movements, smacking of the lips, and spitting, which Dr. Hughlings Jackson has observed, may mean a crude sensation of taste; but spasmodic movements are premonitory of convulsions. In one case of dreamy mental states, which ended in epilepsy, there were during these states rapid clutching movements of the hands. In dreamy mental states that are to prove harmless there is mostly tranquility, but where muscular agitation accompanies them, they are not unlikely to advance into something worse than themselves.

I have endeavoured to indicate the morbid character and tendencies of dreamy mental states by illustrating their transition into epileptic seizures or interspersal amongst them; but this is not the only pathological transformation that they undergo, for a history of them is not rarely discoverable in those who have become insane without the intervention of epilepsy, and the passage from them into states of mental disease may occasionally be traced out. St. Pierre, the author of the ever-fascinating "*Paul and Virginia*," when overcome by disappointment and humiliation, and tottering on the brink of madness, was harassed by seizures which had certainly much in common with dreamy mental states. "I was struck," he says, "with an extraordinary

malady; streams of fire like lightning flashed before my eyes; every object appeared to me double or in motion. In the finest day of summer I could not cross the Seine in a boat without experiencing intolerable anxiety. If in a public garden I merely passed a piece of water I suffered from spasms and a sudden feeling of horror." A patient of my own, who had a sharp attack of mania with delusions of suspicion and suicidal impulses for two years before its development, suffered from dreamy mental states. These first took the form of a sudden dead feeling in the head, said to be both psychical and somatic, which came on almost every day; but after three months they assumed a new shape, a sudden sense of fear, during which all objects around him seemed to grow distant, and after which there was violent palpitation of the heart. Still a third transformation took place, when the sense of fear changed into a wild desire to run round in a circle and scream, and after that came mania. The whole insanity of a patient of mine seemed to consist in an endless chain of dreamy mental states of a claustrophobic nature. She was of good memory, intelligent, and rational, but whenever awake was distressed by constantly recurring painful impressions or obsessions, which she described as a feeling of "entombment." Every few minutes she felt as if she was in a house in the middle of a great wood, and could never get out of it, knowing all the time quite well where she really was. Whenever she looked at the door of the room in which she was sitting she had a horrible feeling that it was too small, and that she could never get through it.

But not more by their transitions than by their associations is the true character of dreamy mental states betrayed, for almost invariably they occur during impaired bodily health or in states of exhaustion, or have bound up with them, either in the sufferer himself or in the family to which he belongs, other and unmistakable symptoms of nervous disease. They rarely stand alone, but have for the most part side by side with them other sure signs of a want of equilibrium or of degeneration in the nerve centres. Dr. Hughlings Jackson has reported a case in which dreamy mental states, consisting in the impression of having fallen down a coalpit, were associated with epileptic seizures, and left hemiplegia, due to a



coarse lesion of the right hemisphere; and it is noteworthy that of the distinguished men of letters whose confessions or dreamy mental states have been quoted Scott, Dickens, and Rosetti, died of brain disease. One of the most striking and persistent cases of dreamy mental state that I have ever met with was that of a man whose father was epileptic, who had one brother a dipsomaniac, another a confirmed opium-eater, another an epileptic, another a lunatic, and one brother and several sisters free from nervous taint. I cannot, perhaps, better convey to you some notion of the associations of dreamy mental states, personal and hereditary, than by recounting the history of a family in which, by a lucky chance, I have been able to trace them through four generations.

A lady who lived at the close of the last century, and up to the middle of the present one, was subject from girlhood to what were then called "spells of absent-mindedness," but which, seen now by the light reflected on them by the experiences of her descendants, may be safely pronounced to have been dreamy mental states. This lady was always nervous and peculiar, and is reported at one period of her life to have displayed insane jealousy; but she bore a family of ten children to a healthy and vigorous husband, and died at an advanced age from epilepsy, from which she had suffered for some years, the fits being heralded by an aura of the left hand and arm, and being sometimes prevented by the firm ligature of that limb. It was not possible to ascertain the pathological histories of her ten children beyond this—that one boy died from convulsions in infancy, and one daughter from phthisis at adolescence, and that two of them, a boy and a girl, manifested neurotic derangements clearly derived from her. One son was distressed in youth and manhood by brief seizures, which may be described now as loss of orientation, but which he himself nicknamed "a topographical topsy-turvy." Generally when out walking, and alone, his consciousness of his geographical bearings became confused, and this without vertigo or apparent movement of objects to one side. In an instant the world seemed to him to have whirled round, and he could not for the life of him make out the points of the compass; although the landscape and all objects around him remained unchanged



in appearance. He felt that it was a matter of pressing moment that he should recover his true position in space, and for a few seconds was in a tremor of perplexity and dread, and then all at once everything was righted, and he knew where he stood, and said to himself, with delight, "That is the north, and I know now exactly how the south and east and west lie." The seizures or bewilderments continued to annoy him, but at widening intervals, until he was about 40 years of age, when one day, while standing on the edge of a rock, and looking at a waterfall in the Scottish Highlands, he fell suddenly in a violent epileptic fit, and was only saved from death by the presence of mind of a companion. From that date he never again experienced loss of orientation, but he had from time to time epileptic fits, chiefly nocturnal, which did not, however, impair his intellect or health, for he died at a ripe age from Bright's disease. His sister, a woman of great intelligence and energy, was subject from girlhood up till middle age to periodical attacks of migraine with fortification outlines and vomiting, which may be regarded as an allotropic form of a dreamy mental state or a sensory epilepsy. She married and had eight children, one of whom died from acute hydrocephalus and two from typhoid fever. Of the five survivors, two, a son and a daughter, became the victims of dreamy mental states at about 10 and 9 years of age respectively, and continued to suffer from them, with gradually-diminishing intensity and frequency, up till middle life. In these two cases the dreamy mental states were identical in nature, and although the sufferers had never compared notes about them, being somewhat ashamed of them, were described in precisely the same terms to the physician who ultimately made inquiries about them. They were called "frightened feelings" and consisted in a loss of personal identity. The youth, who gave the fullest account of them, said that suddenly he lost his hold of the universe and ceased to know who he was. Everything seemed changed in a twinkling, and he lost his relations to time and space. He felt intense terror while the attack lasted lest he should never become himself again, and after it was over there was always violent palpitation of the heart. He was never unconscious during the attack, which lasted ten or twelve seconds at the most, for he could pass from one room to

another or run upstairs and voluntarily call out certain names while it lasted. He generally called out repeatedly and in a hurried manner his own name or that of a sister who was about his own age, and he affirmed that the calling out of these names helped him to recover his identity. The frightened feelings almost invariably came on when he was alone, and when assailed by them he ran to seek society, as the presence of anyone drove them away. They never came on when he was engaged in conversation or in work, mental or bodily, involving effort, but always when he was ruminating or carrying on some routine employment. At one time he could bring them on by gazing intently at his own face in a looking-glass, or by allowing himself to drift into a particular train of thought or becoming "abstract and metaphysical," as he termed it. If he asked himself, "Who am I?" "What am I?" "Where do I come from?" "How do I stand related to persons and things around me?" he inevitably had an attack, and the very fear that he might drift into this current of speculation often irresistibly drove him into it, and ended in a repetition of his sufferings. Fear of any other kind, however, or emotional excitement never induced an attack; but he distinctly recalled that after being taken to the Whispering Gallery of St. Paul's, and being terrified by looking down from its height into the cathedral below, he had several times an attack when the terrific impression he then received recurred to him in memory and created a sense of his own insignificance. The attacks never occurred in the morning, only occasionally in the afternoon or early evening, and by far most frequently as he was undressing to go to bed. As they wore off in adult life, the last vestiges of them were experienced while he was drowsy and just falling to sleep. Suddenly he would spring up in bed, conscious that his old terror was upon him again, though in a dim and distant way, and always after he did so there was palpitation of the heart. He led an active life, but his health and mental condition were, he himself thought, appreciably affected by his attacks, for he never fulfilled the intellectual promise of his boyhood, but was impulsive and irritable, and suffered much from depression and general debility, and finally from angina pectoris. His sister, whose attacks were in all respects similar to his in character, and



consisted in a temporary loss of personal identity, with a feeling of infinite distress, embarrassed breathing, and palpitation, but less severe and frequent, was also of a highly nervous temperament and had an attack of mental depression with rupophobia. The brother married and had two children, a boy and a girl, both of whom suffered from dreamy mental states, and whose cases I was able to observe. The boy began at the age of 10, when fragile and delicate, to have odd and horrid feelings. They generally came on when he was in bed, but they have happened in church, and at a time when he was not apprehending them. Except in church he never had them in the presence of anyone, but always when alone. He could not explain the attacks further than by saying that he felt as if he were "just nothing" while they lasted, and was terribly frightened, his heart beating very fast. During the continuance of the attacks, which never exceeded a few seconds, it was usual for him to touch or pinch his body and limbs with his fingers and thumb and say to himself, "Who am I?" "Am I alive?" It was for the most part while he was thinking deeply on "religious or out-of-the-way subjects," as he phrased it, that the attacks came on, and occasionally he was able, on feeling one approach, by thinking to himself, "Oh, it is all nonsense, I am in a room, that is a chair and this a bed," to ward it off; thus by a strong effort recovering his object consciousness when it began to fail. While suffering from these attacks he was disturbed by violent muscular jerks as he was dropping off to sleep, and on one occasion had a numb feeling followed by shaking down the left arm. He cried out for help and was found sitting up in bed and holding his left arm, which was trembling. At the same time he had a strange dream which recurred again and again, and with which he became painfully familiar. In the beginning of the dream he felt enormously large in all dimensions, as if he were the length of the room, and swollen out so that if he moved his leg it felt like the leg of a giant. Then there came a vast haze, and vacancy and great fear, and in the haze black sticks or stripes appeared all round and seemed to be closing in upon him, and then in terror he awoke. Under the impression that they were just "silliness," and that he would be laughed at if he spoke of them, this boy concealed his dreamy states until he was nearly 14 years of age, when



they became so severe and distressing as to make his life miserable, and he was obliged to acknowledge them. He was sent to the country, freed from brain work, carefully nourished, and put upon bromides, and the attacks rapidly diminished in number and severity, but up till his twentieth year he continued to suffer from them from time to time.

This boy's sister at eight years of age began to suffer from attacks similar to his, which she also for a time kept to herself, because she thought they were due to "conscience," but which were brought to light when his was revealed. They came on, she said, never when there was bustle around or when anyone was talking to her, but always when she was alone, especially when she was sitting doing nothing, looking at her dress or at the floor, and she could induce them when alone by gazing at her hands, saying to herself it was funny that she was alive, and wondering how it was that she came into the world. "The lost or funny feelings" in her, for thus she labelled them, did not cause terror, but only uneasiness, and made her feel like "a nonentity," and were not followed by any disturbance of the heart's action. They lasted only for a few seconds. Once or twice she had numbness of the left hand and transient lateral hemianopia. Like her brother, she had startings on going to sleep and constantly recurring dreams, in her case of skimmings over the surface of the ground and flying downstairs. Objects at which she gazed intently sometimes grew smaller and smaller and receded into distance, and this experience was always followed by a feeling of sleepiness for a few minutes. When just falling asleep she would often hear a low murmuring, crooning noise, as if someone were sneering at her—a sound which was horrid and created alarm, and was so real that she was obliged to jump up in bed and rub her ears. At other times when falling asleep she would have a loud singing in her ears, and while still awake, but lying with closed eyes, she often saw long black figures which changed into little dumpy white ones. On one occasion she saw a spectral face, and having raised herself in bed watched it grinning at her in a corner of the room and noted that it had very white teeth and red hair. She also was put under treatment as soon as her dreamy states were discovered, and improved rapidly when relieved from educational pressure and carefully

nourished. As the dreamy states diminished in number she became visibly happier and more animated, but she continued to suffer from them once or twice a month until she was eighteen years old, when, after an attack of chlorosis, they again became very troublesome. In another year, however, they again yielded to treatment, and now she is, she reports, altogether free from them.

I am afraid I have wearied you by this tedious story of the dreamy mental states of a family. It is, however, I believe, unique in affording conclusive evidence of the hereditary transmission of these states through four generations, and it is assuredly instructive as regards their affinities. I cannot now touch upon the many points of interest which this story presents, and even what may have seemed irrelevant details in it have an interest of their own; but I should like to direct your attention to one or two of its more suggestive features.

In the first place, then, I would ask you to note that it illustrates to us not merely the transmission of dreamy mental states, but of a particular dreamy mental state, and that one of a very elaborate description. The account given of the dreamy mental state in the first generation is too indefinite to enable us to decide its real nature, and in the second generation that state had reference to ideas of space; but in the third and fourth generations, and in four different individuals, it consisted in a loss of personal identity. We have thus a particular aberration of mind springing up spontaneously and independently in four persons, that aberration being exactly the one which the dreamy mental state assumed in the late Lord Beaconsfield, who wrote: "I was not always assured of my identity or even existence, for I sometimes found it necessary to shout aloud to be sure that I lived, and I was in the habit very often at night of taking down a volume and looking into it for my name, to be convinced that I had not been dreaming of myself."

In the second place, I would ask you to note in the story rehearsed the relations of dreamy mental states to evolutionary changes in the brain. The age at which these dreamy states first occurred is recorded in four cases; it was ten in the cases of two boys and eight and nine in the cases of two girls, and it is to be remembered that at that period of life cerebral

development in the female is from one to two years ahead of that in the male sex. In these four cases, too, the dreamy states persisted only while cerebral and mental development was going on actively, and vanished when maturity was attained.

In the third place, I would ask you to note in this story that in four cases the dreamy states came on almost invariably in solitude, which is favourable to subjective contemplation, and that in three cases they were particularly prone to show themselves, like the hallucinations of chorea, during the invasions of sleep, when the brain is freed to a large degree from external solicitations and volitional control, and is in a transitional state.

In the fourth place, I would ask you to note in this story that in three cases—all right-handed persons—indications were given by modifications of sensation and movement in the left arm that along with dreamy states there was, or had been, damage or disorder of the right hemisphere of the brain. Dr. Hughlings Jackson, whose guesses in neurology are more valuable, trustworthy, and enlightening than most other men's lifelong observations and carefully-reasoned conclusions, long ago suggested that in epilepsy with the dreamy state the first spasm or abnormal condition would be observed on the left side of the body corresponding with involvement of the right or more subjective of the two hemispheres of the brain, and these three cases are, as far as they go, corroborative of his view.

In the fifth place, I would ask you to note in this family chronicle that in two cases the impression of looking from a height was apparently influential in inducing cerebral disturbances of the kind which begins in dreamy mental states and culminates in epilepsy. In one case the first epileptic fit occurred when falling water was being looked at from the edge of a precipice, and when unusual ocular movements were therefore rapidly taking place; and in the other dreamy mental states were brought on by the mere remembrances of the agitation caused by looking down from an altitude.

We have all heard of these strange sensations and impulses, psychical reflexes, which have led to suicide by precipitation under such circumstances, and of the fascination which has caused bystanders to yearn to throw themselves in front



of a swiftly passing train, and we may perhaps discover in these phenomena analogues of dreamy mental states. A friend of Arthur Hugh Clough once told me that on one occasion on which the poet was visiting him in Wales he took him for a walk, and conducted him to a grassy slope terminating in a wall which formed the parapet of a huge cliff, with a sheer descent of three or four hundred feet. The wall, a rough stone one, looked simply the boundary of a field, and no one approaching it on the landward side could have any conception of what lay beyond it. The poet, being brought up to the wall, was asked to look over it, and on doing so had suddenly disclosed to him the beetling promontory, the wrinkled ocean beneath, and the circling flakes of white sea birds between, and with a very startling effect. He fell back on the grass pale and shivering, and exclaimed, "Oh, my God! what a fearful sight!" and then turned and said to his friend, "My life seems shrivelled up before me. For Heaven's sake give me some brandy!" But there was no brandy to be had, for the nearest house was four miles off, so nothing could be done for him in his distress but to sprinkle his face with water. He lay on the grass for half an hour, ghastly and sick, like a man at the point of death, and it was then only with the utmost difficulty that he was helped to a farm where stimulants were procured for him. Never afterwards would he permit any conversation about that vision of the sea; he shuddered when any reference was made to it.

This height-terror of Clough, induced by visual impressions of a special kind, recalls one phase of the dreamy mental state, that in which it reaches supreme terror with physical prostration; but a closer analogy to that state is perhaps to be found in the thoughts which arise during the inhalation of certain anæsthetics, and notably of nitrous oxide gas—thoughts which are nebular and voluminous, but which have never in them any tinge of fear or alarm, but are always inflated and exhilarating. When nitrous oxide gas is breathed in the pure state it abolishes volition and consciousness so rapidly that it is not possible for the person breathing it to observe distinct stages in its triumph over him, but when it is inhaled diluted with air its successive effects may be and have been many times marked and

recorded. A momentary sense of suffocation accompanying hurried breathing is followed by feelings of fulness in the head, fixedness in the eyes, and increased resistance in the feet, suggesting that they are on the point of acting involuntarily in throwing the body forward; after these come giddiness and inability to maintain equilibrium, thrilling and vibrating sensations throughout the body, impairment of the power of accommodation in the eyes, and increased acuteness in the sense of hearing, so that distant and otherwise faintly heard sounds are judged to be near at hand; and then come the mental symptoms, which consist in convictions of emancipation, relief, and happiness, in grand and sublime ideas, which in their expansion seem to break down all barriers of doubt and difficulty, and to make a wish and its realisation one, and which, as they dissolve into delirium and confusion, are accompanied by extreme susceptibility to suggestions from without and automatic movements, such as the rapid repetition of a gesture or the vehement shouting many times over of some word or phrase, symptoms which finally merge into convulsive spasms and complete insensibility. It is at the point where the habitual control or check of the highest centres is withdrawn, and where subordinate centres are free to indulge in unwonted activity, that the expansive dreamy thoughts and exalted feelings present themselves in the progress of nitrous oxide gas intoxication. These thoughts or feelings are probably present in all who inhale the gas, and they are always of an agreeable character, for patients sunk in profound melancholia who have had nitrous oxide gas administered have allowed on their recovery from its effects that they had forgotten their misery for a little, had felt lively and like themselves again, or had even had a foretaste of heaven. But these thoughts and feelings, although always agreeable, vary vastly in character, and range from a simple sense of well-being and enjoyment up to the most magnificent conceptions, their complexion and amplitude being apparently determined a good deal by the personal equation. In persons of average mental calibre they are pleasant and stimulating, but in no way remarkable, but in persons of superior intellectual power they become thrilling and apocalyptic. A working man who inhales the gas intimates on his recovery that he felt very happy, just as



if he had had a little too much beer, and a philosopher announces that the secret of the universe had been, for one rapt moment, made plain to him, but only to be swallowed up again in returning consciousness.

The expansive and stupendous nature of the dreamy thoughts induced by nitrous oxide gas in persons of superior and trained intellect is well exemplified in the researches of Sir Humphrey Davy on this gas—researches which, although they were carried out a hundred years ago, have not been surpassed in interest and value by any since made in the same department, even with all the aids of modern scientific apparatus. Describing the effects on himself of long-continued inhalation of the dilute gas, Sir Humphrey Davy said: “My emotions were enthusiastic and sublime. I endeavoured to communicate the discoveries made during the experiment, but my ideas were feeble and indistinct; one collection of terms presented itself, and with the most intense belief and prophetic manner I exclaimed, ‘Nothing exists but thought; the universe is composed of impressions, ideas, pleasures, and pains.’ When I was awakened from this semi-delirious trance indignation and pride were the first feelings produced by the sight of the persons around me.” On another occasion Davy remarks: “The sensations were so intense and pure as to absorb existence, and I fell into unconsciousness.” But Davy experimented not merely on himself but on his friends with nitrous oxide gas; and as among these friends were Coleridge, Southey, Edgworth, and Dr. Roget we have in their observations the best possible evidence as to the operation of the gas on the mental faculties of men of high intellectual endowment. Well, that evidence is uniformly to the effect that the gas induced delicious feelings and heroic or stupendous thoughts. Indeed, of all anæsthetics nitrous oxide gas seems to be definite and uniform in the emotions and dreamy thoughts it induces in cultivated people, and therefore in the lines and order of its invasion of the higher nerve centres in them. The emotions are always pleasurable, the thoughts are in nine cases out of ten connected with some great discovery, some supposed solution of a cosmic secret. A medical man upon whom my former colleague, Dr. Mitchell, experimented with nitrous oxide gas imagined before becoming unconscious that



he had made a most important discovery explaining the whole action of the gas; and Dr. Mitchell himself had repeatedly the same experience, his mind being seized by expansive ideas which, while they lasted, made all dark things clear. So vivid is the impression as to the reality of the ideas met with in the vestibule of nitrous oxide gas anæsthesia, and as to the genuineness of the insight they give, that many attempts have been made by sudden interruptions of the inhalations and by strenuous exertions of will-power to hold and capture them, it need scarcely be said without success. We might as well look for phosphorescence on the sea in the blaze of midday sunshine as hope to reproduce such dreamy mental states in the full light of objective consciousness. Nothing but a vague remembrance that they have flashed across the mind remains when waking life is resumed, and endeavours to recall them or grasp them in passing, when not wholly futile, are apt to prove ludicrous in their results. I daresay many of us recollect the story of the professor who, having experienced a magnificent thought in the early stage of chloroform inhalation, resolved that he would by one bold sally lay hold of it and so read the riddle of the world. Having composed himself in his easy chair in his study, with writing materials at hand, he inhaled the chloroform, felt the great thought evolve in his mind, roused himself for an instant, seized the pen, wrote desperately he knew not what, for even as he did so he fell back unconscious. On coming to himself he turned eagerly to the papers, to find inscribed on it in sprawling but legible characters the secret of the universe in these words, "A strong smell of turpentine pervades the whole."

In rabbits the inhalation of pure nitrous oxide gas produces, after brief excitement, plunging convulsions, which have been said to be most marked on the right side and to be accompanied by drawing of the head to the right, but as regards the human subject I have only been able to find one case in which the invasion of the symptoms caused by inhalation was clearly unilateral. In that case the first physical effect noticed was a difficulty in moving the extensor muscles of the left arm, after which there came loss of power over the flexor muscles of the same arm, and then over the muscles of the other arm.

As the effects of asphyxia by submersion in water of an animal or human being are, as regards the higher nerve centres, not very dissimilar from those of the inhalation of an anæsthetic, we should expect to find during drowning some dreamy mental states analogous to those which attend the inhalation of an anæsthetic. And in this respect our expectations would be well founded, for it is even popularly believed that as life ebbs in drowning there is passed before the mind a panoramic review of its whole history, which we shall have no difficulty in recognising as a dreamy mental state. I am aware, of course, that the possibility of this panoramic review has been denied, and that many all but drowned witnesses have borne negative testimony as regards it, and have represented their drowning thoughts as being of the most commonplace sort and occupied mainly with the weeds, pebbles, or sand that were seen around. I have no doubt the statements made about it have been greatly exaggerated, and that nothing like a complete picture of life ever passed before the mind under such circumstances; but still I am inclined to believe that very voluminous mental states do generally accompany drowning. The weight of evidence is in favour of them. Sir Francis Beaufort, in a letter published in the autobiography of John Barrow, described what happened to him when he was preserved from being drowned, when "every incident of his former life seemed to glance across his recollection in a retrograde succession, not in mere outline, but the picture being filled with every minute and collateral feature, each act of it accompanied by a sense of right and wrong." And since Beaufort's time many persons rescued from drowning have given an account of their expiring thoughts substantially the same and in harmony with what we are sometimes told of panoramic reminiscences in dreamy mental states. A domestic servant who consulted Dr. Hughlings Jackson, when communicating to him the warning of her epileptic seizures, said: "It seems as if I went back to all that occurred in my childhood, as if I see everything so quick and so soon gone that I cannot describe it"; and dreamy mental states, apart from epileptic fits, have been recorded, in which the whole coil of past existence seemed to be instantaneously unrolled.



I cannot further pursue what may be called the disguised forms of dreamy mental states, but I think, had I time, I should be able to show you that what used to be known in Scotland as second sight was sometimes only one of these states with a prescient intention.

I have touched upon the transitions which dreamy mental states undergo, on their associations and congeneric conditions, and I should like to say a few words about their consequences or the effects they exert on those who experience them. When they are linked with epilepsy or other serious nervous disease their effects are, of course, merged in those of the graver malady, and when they are an insulated ailment it may be questioned whether they have any effects that are clearly distinguishable. They carry with them, except when occurring while those who experience them are in positions of peril, no risk to life. They do not tend to self-perpetuation to anything like the same extent as epileptic fits, for in many instances they are, as it were, excrescences of childhood and youth, and wear themselves out in middle age. Even when they cling for life, it is often impossible to attribute to them pernicious results; and yet in many cases they do, I believe, have consequences of a painful and crippling description.

That dreamy mental states may persist throughout life without appreciable detriment to body or mind is, as has been said, undoubtedly true; but the same thing is true of epilepsy, which does occasionally go on into extreme old age without perceptible impairment of intellect or general health. It is sometimes even hinted that epilepsy, or the *morbus sacer*, is advantageous to intellectual development. We are told that Julius Cæsar, and Mahommed, and Marlborough, and Napoleon, and Wellington, were epileptic, and are led to infer that that disease is almost an essential condition of great military genius, and the names of Molière, and Sheridan, and Balzac, and Flaubert, and other eminent writers who have been epileptic are mentioned in order to suggest that that disease is sometimes a valuable ingredient in literary talent. But a strict examination of all such cases brings out the truth that when the epilepsy did not come late in life, as a result of cerebral wear and tear, it did not promote, but to some degree marred, the genius or ability on which it was grafted. No



doubt cases are encountered in which lifelong and violent epilepsy has proved not incompatible with great and sustained mental vigour. I have known a magistrate who, at eighty years of age, was a model of shrewdness and industry, and was still taking an active part in county business, and who had from puberty suffered from epileptic fits at short intervals; and there are, I believe, men similarly afflicted now filling important public positions with usefulness and distinction. Dostoieffsky, the great Russian novelist, was from youth subject to epilepsy of the worst type, and yet, notwithstanding this malady and intolerable hardships endured during imprisonment, penal servitude in Siberia, and enforced military service, he lived to the age of sixty, and went on to the end producing novels which will make his name live for ever, and in one of which he has delineated with minute observance and rare fidelity the symptoms of his own disease.

But such cases are exceptional. The rule is that epilepsy is a blighting, a crippling, a destroying disease. Our asylums, workhouses, prisons, and hospitals are full of the *débris* of its storms, and the flotsam and jetsam left by these may now and then be recognised floating hopelessly in the stream of population in our streets. And so, if dreamy mental states may co-exist with brilliant intellectual powers, with robust health and energetic character, they may also on the large scale tend to undermine the mental and bodily constitution. It is difficult to gauge their effects. Even when occurring in great men they may to some extent limit the greatness to which they are attached; and in ordinary men they do assuredly sometimes blunt the fine edge of talent and induce dulness and stupidity, or lower the breaking strain of the brain. When they occur at wide intervals, their effects are probably immaterial; they are so slight and fugacious as to escape notice. But when they come very frequently, or in batches, I have seen depression, mental torpor, and even temporary dementia resulting from them. They tarnish for a time the brightness of the brain, and reduce the power of resistance of those who suffer from them to other morbid agencies. John Addington Symonds, the historian of the Renaissance, suffered from dreamy mental states, which left on him discernible traces. "Suddenly in church or in company," he said, "when I was reading, and always, I think,

when my muscles were at rest, I felt the approach of the mood. Irresistibly it took possession of my mind and will, lasted what seemed an eternity, and disappeared in a series of rapid sensations which resembled the awakening from anæsthetic influence. One reason why I disliked this kind of trance was that I could not describe it to myself. I cannot even now find words to render it intelligible. It consisted in a gradual but swiftly progressing obliteration of space, time, sensation, and the multitudinous factors of experience, which seem to qualify what we are pleased to call ourself. In proportion as these conditions of ordinary consciousness were subtracted, the sense of an underlying or essential consciousness acquired intensity. At last nothing remained but a pure, absolute, abstract self. The universe became without form and void of contents. But self persisted formidable in its vivid keenness, feeling the most poignant doubt about reality, ready, as it seemed, to find existence break as breaks a bubble round about it. The apprehension of a coming dissolution, the grim conviction that this state was the last of the conscious self, that I had followed the last thread of being to the verge of the abyss, and had arrived at demonstration of eternal Maya or illusion, stirred, or seemed to stir, me up again. The return to ordinary conditions of sentient existence began by my first recovering the power of touch, and then by a gradual, though rapid, influx of familiar impressions and diurnal interests. At last I felt myself once more a human being; and although the riddle of what is meant by life remained unsolved, I was thankful for the return from the abyss, the deliverance from so awful an initiation into the mysteries of scepticism."

These subtly-analysed experiences of Symonds were not, as one of his critics imagines, an efflorescence of the meditativeness and introspectiveness of his nature, but unmistakably dreamy mental states, and dreamy mental states, too, which left a permanent mark or blemish upon him. His achievements, as he has himself declared, fell far short of his own justifiable anticipations and of those of his friends, and throughout life he was haunted by melancholy and by painful but concealed misgivings as to his own weakness. "I feel so weak," he complains, "so unable to take hold of any subject"—and this was long before his pulmonary trouble



commenced. "I wish and cannot will," he again exclaims; "I cannot concentrate myself on an end of action." There was, it must be admitted, something lacking in him, a disarray of the faculties, constant lassitude, and uncertainty as to the path to pursue. His life has been described as a great spiritual tragedy, and it was so, apparently, because his highest nerve centres were in some degree enfeebled or damaged by these dreamy mental states which afflicted him so grievously.

Seeing, then, that dreamy mental states—although occasionally an appanage of genius and often innocuous—sometimes lead up to epilepsy or insanity, sometimes are one of a series of morbid events, and sometimes impair the faculties of those who suffer from them, they are surely worthy of medical observation and research. Especially in children and in the young should they be sought for and studied. If we want healthy and vigorous men and women we must begin with the babies; and if we want strong and stable brains we must see that their foundations are well and truly laid in the spring-time of life. Flaws then overlooked may cause disastrous subsidence long after, and, as dreamy mental states are flaws, I advocate their detection if possible while they are still remediable. I do not suggest that mere children should be promiscuously subjected to crooked questionings, should have strange fancies put into their heads, or should be encouraged in introspection; but I do counsel that when children exhibit anomalous nervous symptoms—forgetfulness, lethargy, paroxysms of passion, immorality, tremors or odd movements or tricks, habit spasms, insomnia or headaches—the possibility of dreamy mental states being present should not be overlooked. A few skilful exploratory queries by the medical man will generally bring them to light where they exist, even when they have been scrupulously hidden away, and their discovery will be a great relief to the little patient and a guide to treatment.

As regards the treatment of dreamy mental states, it need only be said that it does not differ from that of cerebral neurasthenia and epilepsy. In almost all cases in which these states mount to such intensity as to demand treatment there is a reduction in the standard of general health and inferentially abnormal nutrition of the brain; and it would seem,



indeed, that they depend on the reduction of cerebral nutrition to a lower level in whole or in part, and to an attendant increased instability in the brain tissue. In those who suffer from them habitually they become aggravated in character during periods of ill-health and debility, and in town-bred children they are often connected with anæmia and excessive mental fatigue, and occasionally in the case of boys—though not, I believe, as frequently as might be imagined—with self-abuse. Rest and liberal nourishment rarely fail to alleviate and sometimes remove them altogether; but the rest must be adequate and the nourishment wisely chosen. A diet too rich in animal food has seemed, in one case in which I have seen it tried, to make dreamy states worse than they previously were. Shakespeare, in “*Twelfth Night*,” makes Sir Andrew Aguecheek say, “I am a great eater of meat, and I believe that does harm to my wit”; and, whatever the effect of a liberal diet of animal food may be upon the healthy understanding, there can be little doubt that it is prejudicial to the mental power of epileptics. Just twenty years ago one of my colleagues, Dr. John Merson, carried out at the West Riding Asylum, in a masterly way, a series of observations bearing on this point. He placed two groups of epileptic patients on a nitrogenous and farinaceous diet respectively for a fixed period, and then for a like period he changed the dietary of the two groups, giving those patients who had had a farinaceous diet a nitrogenous one, and those who had had a nitrogenous diet a farinaceous one. The patients on whom he experimented were of a chronic and confirmed class—patients in whom long-continued epilepsy had resulted in mental deterioration; and yet even in them marked results were obtained. In fourteen out of twenty-four cases there was a decided decrease in the number of fits during the farinaceous diet, and in a very considerable number of cases it was observed that soon after the nitrogenous diet was commenced mental dulness and stupidity supervened, the patient passing into a state of hebetude, which only disappeared when a farinaceous diet was again resorted to. Quite recently Dr. Sydney Short, of Birmingham, made observations on the same subject, and found that in a number of epileptic patients, also of a chronic class and inmates of the City Infirmary, a reduction in the amount of meat in their diet was followed by a diminution in the number of fits.

What we now urgently need are accurate and extended observations on the influence of diets of various kinds, including and excluding several classes of constituents, in epilepsy and allied conditions, and experiments, scientifically devised and carefully guarded with drugs. We possess remedies which have elective affinities for certain nerve centres, and which, therefore, promise to be useful in epilepsies of certain kinds; and for my part I will not believe that there is any finality in treatment, or that we have not in store for us the discovery of means of dealing with epilepsy and its allies even more potent than that medicine which Sir Charles Locock with such happy perspicuity placed in our hands as a weapon against them, at the very time when it had been omitted from the London Pharmacopœia because of its supposed uselessness and inertness. It is disheartening to reflect, however, that so little is being done, and that the material at hand is not more largely utilised. There are in our asylums and workhouses to-day enormous numbers of epileptics, the majority of whom are, I believe, as far as medical treatment is concerned, left to jolt down the hill of fatuity, headlong and heedlessly, or with only the temporary application of the bromide brake now and then.

The fact that dreamy mental states are sometimes at first and to some extent under voluntary control, so that they can be induced or arrested, affords ground for the hope that well-ordered education and mental discipline will yet be made to contribute largely to brain health. Hitherto the education of the schoolmen, with all its advantages, which I would be the last to disparage, has, alas, been responsible for much cerebral sorrow and ruin. Let us hope that education, when carried out on physiological lines, will conduce to peace and stability in the higher nerve centres. Let us hope, also, that a further investigation of the moral treatment of disease will put us in possession of methods of controlling mental metabolism—if I may coin the term—more powerful and exact than any as yet devised. We shall some day perchance be able by certain courses of study to massage the brain as we now do the body, and by certain definite exercises to bring successively into hygienic activity all the faculties of the mind, as Schott now does the muscles of the trunk and limbs. Gentlemen, I fear I have by my prolixity induced in many of you

dreamy states of a purely physiological kind. I can only trust that they have not been of a disagreeable complexion, and will leave you disposed to extend to me the indulgence I feel I require.

*Dr. Symons Eccles* proposed and *Mr. Laurance* seconded a vote of thanks to Sir J. Crichton Browne for his able and interesting lecture.

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